THE BELGICK, OR Netherlandish HESPERIDES.

THAT IS.

The Management, Ordering, and Use of the LIMON and ORANGE Trees,

Fitted to the Nature and Climate of the *Netherlands*.

By *I. Commelyn.*

Made English by *G. V. N.*

LONDON,

Printed for *J. Holford* Bookseller, at the *Crown* in the *Pallmall*, and are to be Sold by *Langly Curtis*, 1683.

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To the Right Honorable Thomas Belasyse, *Lord Viscount* Fauconberg, *Barron of* Yarome, *Lord Lieutenant of the* North-Riding *of* Yorkshire, *and one of his Majesties most Honorable* Privy Council.

THis *Belgick Hesperides* (in an English Dress) is humbly Dedicated,

By your Lordships,

Most Humble, and most

Obliged Servant,

A 2 *G. V. N.*

THE PREFACE OF THE AUTHOR.

A Small part of Gardening comes here to light, being the Ordering of outlandiſh Trees, Loved by many, but known by few; of which ſome thing hath been Publiſhed by ſome of our Country Writers, but by none perfected as it ought: It is the Nurſing, Raiſing, and Ordering of the Limon and Orange Tree, which comes forth under the Name of the Netherlandiſh Heſperides, *and is by the Experience of many Years Arrived to*

this, and through the ſparing of ſome leiſure Hours committed to Paper. It was never intended to be made common by the Preſs, but that the frequent Importunity of ſome worthy Friends did promote it, and to overcome the manifold Difficulties which diſcovered themſelves in this Work; and the more, becauſe this Practice here in this Country is undertaken by many eminent Perſons, who through ſelf-Ignorance truſt all to their Gardiners, who themſelves are but little acquainted therewith.

This Heſperides *is opened to every one, and ſheweth itſelf under a ſtrange Name, having herein for Patterns the excellent* Jovianus Pontanus, *and the Learned Jeſuite* Joannes Baptiſta Ferrarius, *who both have effected and performed their Deſcriptions, under the Name of* Heſperides; *the one in Verſes, the other in an high ſtiled Proſe; yet only according to the Condition of their Countries, which differs much*

much from ours, ſo that theirs could not ſerve us but in a few things, which we have followed, and have found true by Experience.

Conſidering the Order, by us Obſerved, we have borrowed from Ferrarius, *being the ſame cannot be Amended: But we have further Endeavoured to bring and order the Work into ſuch a Manner, as the Air and Condition of theſe Northern Countries doth require, which are ſubject to many intemperate Summers and Winters. The Report of many Fictions, with their Circumſtances which belong to the Garden of* Heſperides, *are upon good reaſon paſſed by, and what is chief, only touched upon in a few Words, ſeeing unneceſſary Narration is nothing but uſeleſs Labour.*

Our only Aim was, chiefly the Deſcription of the Trees, and their Fruits, in particular; and afterward the Ordering of them, with whatſoever belong-

eth thereunto, as well of them that are first brought out of Italy, as of them that are here in these Countries raised from Seeds.

In all this we have Observed, and most clearly Proposed the simplest and plainest Way, avoiding all Artificial Inventions, which are Communicated to the World for Wonders, and must justly be Rejected by a true Practitioner; because Experience hath often Taught, that they who followed and used them, have been much Deceived by them.

The Mischifs and Decayes which sometimes happen to these Trees, with the Helps and Means against them, are likewise duly Noted; and afterward the Use of the Leaves, Blossoms, and Fruits set down.

This is briefly the Sum of the Hesperides, which doth not appear to reprove what others have already Written thereof; but only to Impart to our Country that which as yet it wanted, viz. The

true

true Knowledg of this Practiſe: It is true indeed, the Netherland has many eminent Perſons which are Experienced and Skilled herein, but yet more who take this Work in hand without Knowledg.

We hope that this our Labour will not be Unacceptable, tho perhaps it may ſeem ſtrange to ſome, that for ſuch ſmall things ſo much Paper is blotted, as tho it were of ſome Concern, being it ſeems more the Work of an Husbandman then of ſome conſiderable Perſons. Theſe Men we ſend to the ancient Hiſtories, and the yet daily Experience, which are both ſufficient Witneſſes, how that Kings, Princes, and eminent Perſons have employed themſelves in Gardening, and whereof our Netherland has not a few Examples.

For which Reaſon then doth the Belgick or Netherlandiſh Heſperides preſent her noble Fruits to every one that ſhall not be afraid of the Pains

Pains and Labour to undertake the Practise, and duly Perform the same.

THE

THE BELGICK, OR Netherlandish Hesperides.

CHAP. I.

Of the Cause and Order of this Work.

BEing the Ordering or Management of the Limon and Orange Trees is much Increased within these few Years, by many Inhabitants of our

our Country, and would yet Increaſe more, if Ignorance and unskilfulneſs were not in the Cauſe.

To open the Door to this Science, this *Heſperides* is come to Light, offering her Golden Apples to every one, tho not without prudent Labour: Which we ſhall here Propound in order.

Firſt, A ſhort Introduction ſhall be given to the Knowledg of the Trees and Fruits, which are Deſcribed every one in their particular Kinds and Parts.

Secondly, The Ordering and Uſe of the Fruits, with their moſt excellent Profit and Uſefulneſs, which are all ſhortly and plainly Communicated to all Managers, that whoſoever is pleaſed to Travel in our *Heſperides*, to Advance this Husbandry to the higeſt pitch of Perfection; whereunto every one muſt ſhew himſelf as an *Hercules*,

cules, and bend all his Strength, that he may break through by the waking Dragon into the moſt inward Garden, to ſatisfy the ſweetneſs of his Invited Deſires to this Exerciſe.

CHAP II.

The Fable of Heſperides.

UNder the Name of *Heſperides* is nothing elſe Underſtood by Modern Authors, but the Ordering and Management of Citron, Limon, and Orange Trees.

To Rehearſe all Fictions made hereof by the Poets, ſeems unneceſſary to us, becauſe we only intend

intend to be ſhort.

Where this Heſperial Garden was Scituated, is as Uncertain as the Truth of the mentioned Fictions: Even as that the ſame was Guarded by a Dragon, which was Overcome and Slain by *Hercules*, whereof *Virgil* makes Mention.

Æneid. Lib. 4.

Heſperides is the Name of the Daughters of *Heſperus*, Brother to *Atlas* King in *Africa*, and were three, *Æglen*, *Arethuſa*, and *Heſperthuſa*, and called after their Parents, *Heſperides*, and *Attlantides*.

Diod. Sicul. Rer. antiq. Lib. 2.

That the Place where this Garden was Scituate, is uncertain, as is mentioned above, is alſo Teſtified by *Ferrarius*; for the Ancient Writers differ about it.

Heſp. Lib. 1.

Plinius Deſcribes the ſame with theſe Words, *by* Sertim *is the great Garden of* Heſperides.

Hiſt. Natur. Lib. 37. *C.* 2.

The Garden of *Heſperides*, as ſome ſay, is Scituated in the *Mores* Country,

Strengel. Hortor. Hiſt. l. 2. *c.* 8.

Country, in which golden Appels grow and are produced, which is Guarded by the ever waking and vigilant Dragon.

The moſt common Opinion is, that the Garden of *Heſperides* was Scituated in the Weſt part of *Æthiopia*, or the *Mores* Country, where now are the Kingdoms of *Fetz* and *Marocco*, about the old River and City of *Lixo*; and here is, according to the Opinion of many, the Native Country of the *Heſperial* Fruits. *Ferrarii Lib. Heſp. 1.*

Of the City of *Marocco* is it thus Written; Near the Walls of the Pallace, about half an Hours Journy from the City, lyes a Noble Pleaſant Orchard, or Garden of Pleaſure belonging to the King, Called *Montferat*, planted with above fifty Thouſand Limon Trees, and the ſame Number of Orange Trees, ſo that it is not ſtrange that *O. Dapper's Africa.*

theſe

Ferrarii Hesp. l. 9. de Cit. these Countries and Regions are supposed the Garden of *Hesperides.*

By the Diligence of *Palladius* are the Citrons brought over out of *Media* and *Persia* into *Italy*, there Ordered and Raised; and thence carried further into *Spain*, *Portugal*, and other Countries, till at last our *Belgium*, or *Netherland* got its part and share.

Tho now at that time the different Variations and Kinds of Limons, Citrons, and Oranges are many, which is caused by the Navigation of the *Spaniards*, *Portugees*, who have brought several strange Sorts and Kinds into *Europe.*

That both the *Indies* are plentifully provided and stored with this Fruit, Testify the Descriptions of those who have Travelled through those Countries.

Linschoten

Linschoten saith, That in *Guinea* are Limons, Citrons, and especially very Toothsom Oranges; and in *China* there are Oranges that are beyond Sugar in Sweetness. Cap. 49.

Baldeus in the Description of *Ceilon*, That there are the best Oranges, Limons, and Citrons, which excell others of the whole *Indies*; yea, even those of *Spain* and *Portugal*, whither, as is said, they are brought by Navigation; and there so Multiplyed, Raised, and bred, that these Trees seem to be become a Native and Inlandish Plant; and as the daily Experience also sheweth by the great quantities of the Fruits which yearly are brought to us out of those Countries.

And except the Ancients had in some measure pointed out unto us the place of the *Garden of Hesperides*; who would have ventured

A Lake in *Italy* not far from *Brixia*.

to place it any where, but along the Coast of the Mediterranean Sea: and especially the fruitful *Benacus*, from whence our *Hesperides* must be brought with great Diligence and Pains into our Country.

CHAP. III.

Of the Kinds of the Fruits in General.

ACcording to the Number of the *Hesperial* Virgins are their Fruits Divided.

Æglen, the Citron Tree; *Arethusa*, the Limon Tree; *Hesperthusa*, the Orange Tree.

This Appellation is no other-

wiſe uſed by the Modern Writers, then to Expreſs the three diſtinct ſorts of Fruits.

Ferrarius hath Divided his *Heſperides* by theſe three Names; and the Reaſon why largely handled.

Under theſe three Sorts and Kinds are all the Heſperial Trees Comprehended.

The Citron Tree, brought out of *Media* by *Palladius* above twelve Hundred Years ago, and Planted and Ordered about *Naples*, is the firſt in Order, hath ſome of the ſame kind, conſiſting of Sowre and Sweet. Citron Tree.

The Sowre are only different in the outward Form and Shape; for the one is Oval, Long, and Roundlike; the other *Calabas* Faſhion; and the other again of an ill-ſhapen Form.

The Sweet Citron Tree hath not ſo much Variety; yet 'tis

to be Lamented, that the Intemperance of our Netherlandiſh Climate, doth not permit us to Set or Place Æglen in our *Heſperides*: The Cruel Northern Storms ſhe cannot reſiſt, and the long Winter cauſeth her merry Leaves to fall to the Ground, and looſe all the Beauty of her Head Attire: and therefore it is better to leave this tender one in her own Country, then to make her dye for Sorrow in this our hard Country, and ſevere Climate.

Arethuſa, the Limon Tree, is ſtronger, and will with her Siſter *Heſperthuſa*, the Orange Tree, thrive better in this *Netherland*; and therefore we ſhall more largely ſpeak of their ſeveral kinds; becauſe theſe two do above all other Plants adorn our *Belgick Heſperides*.

The Limon Tree hath many ſorts;

Bauhinus

Bauhinus reckons them nine, But above all *Ferrarius* makes them above fifty, all different from one another, and at this day known in *Italy*, and noted by none but himſelf; Only ſome few are but as yet and at this day known in our Gardens; which we ſhall hereafter decipher and deſcribe in order. *C. Bauhin. Libr. 11. Sect. 6. Ferrar. Heſp. Libr. 3.*

The Orange Tree was unknown to the Ancients; and by *Bauhinus* diſtinguiſhed into four ſorts. *Pinax. Lib 11, Sect. 6.*

At this day is the ſame made known to us by *Ferrarius* under more kinds and are almoſt all found in *Netherland*, yet the one more fruitful then the other; We ſhall relate them orderly in their due place, and whatſoever ſhall be further neceſſary thereunto. *Heſp. Lib. 4.*

Here it might be uſeful to put down all the particular alterations, changes

changes and sorts which are observed by *Ferrarius*.

But being he makes many sorts of such, as are but faulty in their Growth, & we only purpose to describe those that are found here in our *Netherlandish* Gardens, we have judged such long and tedious relations unnecessary.

CHAP. IV.

Of the First Practicers Or Inventors,

WE have touched before, how that the *Citron* Tree (and perhaps others) were brought out of *Media* into *Italy* by *Palladius*, but

but who raised and ordered them first in *Netherland*, is not well known to us.

It is certain that this Work is in few years come to perfection here; that our Fore-Fathers an hundred Years ago, knew but little of it, appears by the Writings of *Carolus Stevens* in his improvement of Land, and others more.

Clusius is, according to my Opinion, among the first, who hath brought these Trees into *Netherland*: for there be as yet to this day some Limon and Orange Trees in being in the University Garden at *Leyden* which were raised by him from the Seed but only Wild and unfruitful, without any Inoculation.

This Ordering and Managing hath been known in *Flanders* and *Brabant* these many Years, as *Ferrarius* relates to us of the Noble *Hesp. Lib. 2. Cap. 17.*

Sener

Seuer Guilielmus de Blasero at Gaunt in Flaunders, who was most eminent in this Science, and doth with Admiration take notice of it.

And such there are as yet many found at this day in Brabant at Brussels, and Antwerp, where the most Trees are raised from the Seed, and brought to perfection.

Pleasant Italy hath first furnished our Netherland out of her Hesperides and communicated to us of her Fruits.

The right knowledge of their Ordering is found out in Holland, by the Sieur John Roetes, in his life time Secretary of the City of Amsterdam, whose knowledge in this Science hath excelled above all others, as the truth hath assured to many eye-witnesses; yet by his immature death is this Noble Amsterdam Hesperides disanulled,

whose

whose Fame and Renown spread it self not only in *Netherland*, but also in divers other Countries; so that the same was visited by many Eminent Princes, and hath had the Honor that the most Illustrious Prince *Cosomus de Medicis*, Great Duke of *Florence*, *&c.* was taken with great admiration at this *Hesperial* Plantation, when he beheld the perfect knowledge of this most Excellent orderer, and manager.

No less Eminent in this Science was the Sieur *William Vanden Heuvel* Merchant at *Amsterdam*, by whose means this affair did much increase, and all Spectators were stirred up with an inflamed desire of these Golden Fruits, wherewith the *Hesperial* Gardens of these Persons abounded; for through may years experience they attained to the desired end.

We

We shall give them the Honor, and are certainly perswaded that they must be numbered among the first Inventors, *Viz.* among those that have brought this Work to perfection among us.

And we thought good to insert their names here, To keep them out of the Grave of Forgetfulness, and to make them flourish among posterity, as Long as the ever green Aspect of our *Hesperides* shall be acceptable, and delightsome to all true Lovers and Practicers thereof.

CHAP.

CHAP. V.

Of the Citron *Tree.*

THough the *Citron* Tree cannot bring her fruit to perfection in *Netherland*, yet we ſhall vouchſafe her the firſt place in this *Heſperides*, in hope that ſome may yet find out a better means to nurſe and raiſe up this tender *Ægle*.

The ſhape.

This Tree is of a middling bigneſs, the Stems or Boughs are thin and weak, armed with many pricks. But with us they are the ſtrongeſt of all the ſorts of evergreens of thoſe Kinds. The leaves like thoſe of the Bay tree, but much

much larger, jagged on the edges, of a deep green, strong scent, and better taste, the blossoms grow at the end of the boughs, close together, have thick fleshy Leaves, the out side like Purple, the inside white, under the top light saffron coloured, and hairy, of a weak scent; first sweetish but afterward bitter in the Taste; We see here an Oval long and roundlike beginning of the young Fruit in the middle of the Blossom, without which sign they are unfruitful and fall off, they that hang faster to the Tree produce no unfruitful Excrescence, but the fruits proceed from that Principle thereunto fastned.

These *Citrons* are Oval, long and roundlike, swelled and thick in the middle, and sometimes dinted, running sharp together at the end, and sometimes with bumps;

so

so that we may observe therein a wonderful display of Nature.

The bigness and weight is not alike, but very different; in *Calabria* they commonly weigh from six to nine pound: But about *Genoa* they have been seen, according to *Ferrarius* his saying, of about thirty: the outward Pill and Rind is of a Gold Colour wrinkled and somewhat warty, the inward Pill is white and sweet, the Pulpe full of sowre Juice and Liquor, stored with many long and roundlike Seeds and Kernels. *Hesp. Lib. 2. cap. 3.*

This Plant is brought out of *Media* into *Italy*, as we have said, before, and is also described by the Poet *Virgil*. *Place. Georg: Lib. 2.*

The *Citron* Tree is called in Latin *Malus Medica*. B. P. *Citrium* & *Malus Citria*, in the Greek μηλέα μηδική *Malus Medica* and *Assyria*; *C. Bauhin. pinax. Lib. 2.*

The

The *Citron* is which the Hebrews call הדר *Hadar*, that is fair and goodly; and they use the same in making of green Bowers: For all they that are of any ability among them will not neglect to get these Fruits against the Feast of Tabernacles to adorn the preparations therewith: For it is said, *Levit.* 23, *V.* 40. *And ye shall take you on the first day boughs of Goodly Trees* &c. This word *Hadar* is by the Learned in their Law taken for that, and among others also the *Myrthus*, *Myrtle*-Tree, which they desire not, except three Leaves stand over against one another in the length of five inches at least, thus satisfying their Superstition without any certain Evidence of truth: Even as they say that the *Citron* Apple was the Fruit which *Adam* did eat in *Paradise* against the Command of God.

The

The kinds of this Tree consist only in the various and different shapes of the Fruits, except the sweet; and are by *Ferrarius* thus divided,

1. *Malum Citreum Vulgare.*
2. *Malum Citreum Vulgare bellua-tum.*
3. *Malum Citreum Cucurbitum.*
4. *Malum Citreum dulci Medulla.*

that is

1. The common Citron Apple.
2. The common Citron Apple of a deformed shape.
3. The common Citron Apple like a Gourd.
4. The sweet Citron Apple.

He doth yet further describe one by the name of *Malum Citreum*

treum Multiforme, a Citron Apple of many Forms and shapes.

But this is only a Display of Nature, not a certain and particular Kind, as is found in many Fruits.

Yet seeing we cannot bring these Trees to perfection in these Countries or Climates, because the warmth or heat is not sufficient to ripen the Fruits, we intend to say no more concerning them, but to trimm up and adorn our *Hesperides* with such as may by a well ordering and careful management make our Gardens in *Netherland*, pleasant and delightful with their fruitfulness.

CHAP. VI.

CHAP. VI.

Of the Limon *Tree.*

Aethuſa with her Gold-coloured Fruits, ſhall have the firſt place in our *Heſperides*; as being eſteemed nothing inferiour to *Æglen* in Virtues and Pleaſantneſs.

The Form of the *Limon Tree* in general, is like that of the *Citron Tree.* Form & Shape.

Divers ancient Writers have made no difference between theſe two, becauſe they are both aſcribed to one Country, Naming the ſame Trees *Malus Medica*: Others have held them for one *Ferrar. Heſp. Lib. 3. cap. 1.*

kind with the *Citron*.

The *Limon Tree* grows indifferently high, hath many ſpreading Boughs, ſet with Prickles, makes not ſo cloſe an Head, neither is the Wood ſo hard as that of the *Orange Tree*. The Leaves are longiſh, like them of the *Citron Tree*, yet ſhorter, running ſharp together at the end, interwoven with many ſmall Veins; the Bloſſoms are of a weak Sent: Some ſorts bring forth Bloſſoms like to the *Orange Tree*, but moſt like to the *Citron Tree*. Before the Buds open themſelves they are of a purple Colour, within of a fair White, beautified with yellow Threads or Streaks.

Time. They blow here in this Country in *July*, and yield Fruit in *Autumn*: being come to the bigneſs of a Walnut, they continue ſo till the next Summer, when they begin

gin to grow anew, and become fully ripe in ſixteen or eighteen Months after their blowing.

The Fruits are of an oval Shape, though ſomewhat rounder, and more drawn in; of a pale yellowiſh Colour, weak Sent, ſomewhat like the *Citron Apple*, and is by Art of Ordering and Dreſſing brought ſo far in bigneſs and fairneſs, that it needs not to give place to it, and eſpecially in variety of Kinds, in which it is enlarged and increaſed by Sowing and Inoculating.

The *Limon Tree* is diſtinguiſhed into *Limon*, *Pourin*, *Adam's Apple*, *Paradiſe Apple*, *Limia*, and *Limas*.

The *Limon Tree* is called in Latin *Malus Limonia*; and the Fruit *Limon* in Greek, λεῖμων.

They which are found in our Netherlandiſh Gardens, ſhall follow in their Order.

CHAP. VII.

Of the Ordering White Limon.

AMong all the Limons, which here in this Country come to Maturity, this is none of the leaſt.

Shape. The Tree which produces this Fruit ſpreads its Boughs (which are ſet with many Prickles in many places) wide aſunder: The Bark is pale, the Leaves light Green, broad, running round-like together at the end: The full Shoots are ſomewhat of a reddiſh Colour, which afterward become fairly Green: The Bloſſoms conſiſt

ſiſt of five, ſix, or ſometimes of more Leaves, which, before they open, are of a purple Colour, and white within. The Fruits are indifferently bigg and large; of a different Shape, the one roundiſh, tho long and round-like, and ſome alſo Ill-ſhapen: The outward Pill is of a fair Yellow, ſmooth, and of a pleaſant Smell; The inward part of the Pill is thin, the Pulp greeniſh Yellow, divided into eight or nine Veins or Partitions of a pleaſant Taſt, full of Juice and Liquor, commonly hollow in the midle, and doth bear very well.

In the Year 1670, I have cut in one day fourſcore ripe Fruits, Limons, of a little Tree; ſo that it is in all particulars worthy the Ordering and Husbanding.

This Limon is called by the Managers and Practiſers that Or-

der and Husband those Plants and Fruits, the *White Limon*: And is the *Limon Vulgaris Ferrarii*, the common Limon of *Ferrarius*.

Hesp. Lib. 3. Cap. 2.

Hath several sorts which differ one from another in Shape, but little in Taste: the greatest Difference lying herein, that the Leaves of the one are somewhat more sharp Pointed and jagged then the other; which also observed in the Fruits, which differ and are distinguished from one another in length and roundness.

We have at several times taken Notice, that the Fruits of one and the same Tree were very unlike in Fashion and Shape one to the other.

CHAP.

CHAP. VIII.

Of the Limon Sbardonius *of* Ferrarius.

AMong the kinds of Limons which are found in the Netherlands, this is eminent: Which, beſides the two following, we have ſeen gathered in the Garden of the Learned Dr. *Arnold Syen Med. & Botan. Profeſſor* at *Leyden*, in the Year 1672. This Limon Tree hath regular and well ordered Boughs, and may be kept with a fair and round Head: the Leaves are light Green, longiſh, ſharp-pointed at the End, a little wrinkled, with the Edges

ſomewhat jagged: they are without with purple Streaks or Stripes, and within White; the Fruits long and round, of an indifferent bigneſs, at the end of the Stalk a little dinted, where it ſeems to repreſent the ſhape of a little Roſe, at the Head is many times a little Point ſticking out, as if it were the remnant of the middle Point or Navel of the Bloſſom: the outward Pill is of a fair yellow Colour, Uneven, Rough, and as it were with Creaſes: the Taſt Pleaſant, with ſome Bitterneſs: the inward Pill is ſomewhat thin, in the Taſt Sweetiſh: the Pulpe is pleaſant Sowre, pale Yallow, divided into ten Veins or Partitions.

Among theſe *Heſperial Plants*, this is one of the moſt patient to endure the Injuries which are cauſed by the Low-Country Air.

This

This Limon Tree is called by *Ferrarius Limon Sbardonius*, after an excellent Practiſer of this Husbandry, called *Fabritius Sbardonius*, who did firſt produce the ſame at *Rome* out of his own Garden, being without doubt an alteration by frequent Grafting and Inoculating. *Heſp. Lib. 3: Cap. 15.*

CHAP. IX.

The Deformed or Illſhapen Limon Sbardonius.

AMong the Diſplay of Nature, The Limons are not forgotten: We give here an Inſtance, which ſhall ſufficiently diſannul the Poſition or Opinion of ſome

ſome Writers, who make many ſorts of Fruits, which only conſiſting in different outward Shapes, do nevertheleſs grow upon one Tree, as this and the following Deſcription ſhall ſhow, as being fellow-Fruits of the *Limon Shardonius*.

Shape. Very irregular is this Fruit, of an oblong and oval Faſhion, on the one ſide wonderfully, or much bumping out with Claws, at the End whereof were four green Nails, like them of an Hens Foot, two lying croſs one another, on the other ſide every one ſingle, parted one from another, which is ſtrange to ſee: Being cut in the middle, it divided itſelf into ſeven Particulars or Partitions, tho on the miſhapen or deformed ſide wonderfully wound and twiſted together.

Hiſp. Lib. 3. Cap. 6. *Ferrarius* hints of the *Limon de Rivo*,

Rivo, that he hath found on it ſomething grown out of it, having the ſhape of a Mans Hand, with the Fingers twiſted and ſhut one in another, affording a ſtrange Appearance to the Eyes of the Spectators, but they that inquire and ſearch into the matter, ſhall find that theſe Fruits are to be accounted nothing but imperfect Creatures and Products. We have beſides ſeen on the ſame Tree of *Limon Sbardonius* of *Ferrarius*, this ſtreaked Limon, which is like the firſt in Faſhion, but in the length interlaced with deep Furrows, which went from one end to the other, having at the end a Point ſticking out: the inward Pill was thin and narrow, and the Pulpe divided into ten Veins or Partitions. This Alteration is here exhibited to ſhew the wonderful Works of Almighty God, how that

Limon Sbardonius, with Streaks or Furrows.

that upon one Tree, one ſort of Fruit is brought forth on ſeveral ways, and yet are no diſtinct Sorts, as many make of them, and communicate to the Ignorant, and Unskilful; which we have mentioned before, and with *Ferrarius* looked upon as a Diſplay of Nature: But nevertheleſs, put and placed by him with different Deſcriptions, as different Kinds, as appears in the *Limon Pyri effigie* of a Pear faſhion, and in the deſcription of the *Limon Striatus Vulgatior*, that is the common Limon with Ridges, which I have taken Notice of here for every ones Caution, not to bring preſently a thing to a new Diviſion; but firſt to ſearch out the Cauſe of this wonderful alteration, wherein we ſhall, ſhow that the Bloſſoms which produce theſe Illſhapen Fruits, are very imperfect in their Formation.

Heſp. Lib. 3. Cap. 11. Idem. Cap. 14.

CHAP.

CHAP. X.

Of the little Calabrian Limon *of* Ferrarius.

THis Limon, Called of *Ferrarius Limon Puſillus Calaber*, or the little Calabrian Limon, after her Country: hath its Boughs full of little Prickles, the Leaves have the Form at the end of the Stalk, as that of the Orange Tree, and are of a dark green Colour, like that of the *Laurus Leodmenſis*, round about the Edges a little jagged, the Bloſſoms are ſmall, without of a purple Colour, within White, of a pleaſant Smell: the Fruits are of the bigneſs of a ſmall Hen's

Heſp. l. 3. cap. 5.

Shape.

Hen's Egg, of a Fashion Oval, or Oblong, pointing out at the End, as it were with a little Horn: the Pill is of a fair yellow Colour, Thin, pleasant of Taste without, White within; the Pulpe is divided by nine Veins or Partitions, of a greenish Colour, of a sharp sowre Taste. This Fruit have we gathered ripe in the Month of *August* 1672, in the Garden of Sieur *Peter de Wolf* in the *Purmer*, and here described to the Life: This Plant is very Fruitful, and can well endure our severe Air, without receiving any Injury from it.

Second Sort. There is yet another of this Sort or Kind, which is likewise a pleasant Fruit; and I have a little Tree of it in my Garden, and is called of *Ferrarius Limon Pusillus Calaber alter*, that is, the second sort of the small Calabrian Limon.

mon. The diverſity conſiſting herein, that this Fruit is in all parts much ſmaller then the foregoing, and may very well be taken for a Dwarf, which ſhews itſelf pleaſant and delightſom to the Sight. This little Tree hath very thin tender Boughs, full of many Prickles, the Leaves are of a ſmall Form, not unlike the *Phyllerea*, of a dark green Colour: the Bloſſoms are like them of the foregoing Sort, but much ſmaller, as alſo the Fruits, which are of ſomewhat a rounder Faſhion, and fit to be preſerved in Pickle, being very pleaſant for Food.

CHAP.

CHAP. XI.

Of the Sweet Limon of Ferrarius.

Shape. *Hesp. Lib. 3. Cap. 19.*

THE *Limon dulci medulla Ferrarii*, is *malus Limonia Major dulcis* of *Bauhinus*. The sweet Limon of *Ferrarius*, is the great sweet Limon of *Bauhinus*, and grows on a fair Tree, and pleasant to look upon; whose Boughs are beset with many and several Prickles, hath Leaves somewhat like them of the Orange Tree, only at the end of the Stalk they want a little Hart.

Pinax. Lib. 11. Sect. 4.

The Blossoms are also like the Orange Blossoms, fair White, and of

of a pleaſant Smell, the Fruit is Large, Oval or Long, and Round-like of Shape; the outward Pill, fair Yellow, of an Aromatick or Spicy Taſt, the inward Pill thick, not unpleaſant; the Pulpe is deep Yellow, divided by nine Veins or Partitions, pleaſant Sweet. Theſe Fruits grow ſometimes very large, and much eſteemed in hot Diſtempers, to uſe for the refreſhing of the Sick. In the famous and renowned Garden of the Sieur *John Roeters*, have we ſeen the ſame often Ripe and Eaten them: And is well worthy our Husbandry, as well in regard of the noble Fruits, as of the fair Plant; pleaſant Bloſſoms, and excellent Faſhion and Form of the Tree: They are rarely found here in theſe Countries, but only among ſome Lovers, who hold the ſame in great Eſteem, becauſe they are hard to

be got out of *Italy*, being highly valued there, and not often ſent over among the common and ordinary Trees.

CHAP. XII.

Of the Limon Tree of St. Remo.

The Shape.

THE Tree which produceth this Fruit, is in our Garden, I have received the ſame among others from *St. Remo*; he makes irregular or diſorderly Boughs, brittle Wood, covered with a dark Green Bark, the Leaves are likewiſe of a deep Green, of a longiſh round Faſhion, not ſharp, running together at the end; the Bloſ-

Bloſſoms are mixed throughout with purple Streaks, of a ſtrong Smell, like them of the *Citron Tree*: the Fruit is Oval or longiſh Round, ſharp at the End, with a long Point ſticking out, almoſt like the Nipple of a Womans Breſt) behind, where they be faſt to the Stalk, deep-dinted; the outward Pill or Shell is deep Yellow, Rough, Uneven, and of a bitter Taſt, though not of an unpleaſant Smell; the inward Pill is almoſt a Finger breadth thick, pale-Yellow, and Bitteriſh; the Pulpe have we found to be divided by nine Veins or Partitions, Sowre, Sharp, and Harſh. This Fruit grows Large, and I have had them Ripe often: That which makes this Tree not beloved, is the Tenderneſs thereof; for he often ſheds and looſes his Leaves in the winter, which makes

him look Unpleasant: We judge this to be the first *Limon Ligusticus* of *Ferrarius*, as agreeing therewith in many Particulars. This Tree doth blow very freely, which continues almost all the Year long, and we are necessitated to pluck off the Blossoms, to the end the Tree may keep his Strength and Vigour. The same is related by the forementioned Author also of the second Sort, called by him *Limon Liguriæ Cerieſous*, which produces both Blossoms and Fruits four times in a Year.

Hesp. l. 3. cap. 3.

CHAP.

CHAP. XIII.

Of the Pear-Faſhion Limon of Ferrarius.

WE have among many other Limons from *Genoa* received alſo this moſt pleaſant Plant; being the *Limon perellæ Conſimilis* of *Ferrarius*, very like the ſame, or a Kind and Sort thereof, becauſe there is ſome difference in the Deſcription of it. *Heſp. l.* 3. *cap.* 11.

This Tree hath tender and little Boughs and Branches; the Leaves are of a pale Green, ſharp-pointed at the End, the Edges jagged, and behind at the End a thin longiſh little Hart, as a parti- Shape.

cular Stalk whereunto the Leafe ſeems to be faſtned: The Bloſſom is of a purple-like Colour, like that of the Citron Tree; the Fruit we have ſeen ripe in the Year 1672; is of a longiſh Faſhion, extuberating or riſing in the Middle, and runs again ſomewhat narrow downward, and above at the Stalk ſomewhat thick, where the ſame is a little dinted; the outward Pill is Yellowiſh, rough with ſmall Bumps and Knobs, the inward Pill thin; and the Pulpe great or bigg, full of Juice, of a yellowiſh Colour, divided by nine Veins or Partitions, where we found ſome beginnings of Seed, the Taſt was very pleaſant, between Sower and Sweet; This above-mentioned Limon Fruit we have firſt got from the Sieur *Boot*, Senator in the Court Provincial at *Utrecht*, who hath a fair

fair Tree of the ſame in his Garden; we have likewiſe afterward received one among other Trees from *Genoa*; and uſe yet daily as much Diligence, as is poſſible to increaſe the number of the ſeveral Sorts and Kinds, for the Ornament of our *Netherlandiſh Heſperides*.

CHAP. XIV.

Of the Lima.

Shape.

AMong the Kinds and Sorts of Limons, called *Lima*, we have had as yet no other but the Sweet: the Tree hath brittle Wood, the Boughs are light Green, ſet with ſmall Prickles

in ſome places, hath longiſh Leaves, as they of the ordinary Limon, light Green, and the Edges a little jagged; being rubbed give a pleaſant Sent or Smell; the Bloſſom is ſmaller then of other Limons, of a white Colour, like unto the Orange Dwarf; the Fruit is round at the end, with a little Nipple pointing out, of the bigneſs as an ordinary middle ſized Orange; The outward Pill is very thin and ſmooth, of a pleaſant Smell, Yellowiſh, with a thin inward Pill; the Pulp is of a Brimſtone Colour, and divided by ſeven, and ſometimes eight Veins or Partitions, of a very ſweet Taſt: this Fruit we have often had ripe in theſe Countries; and it is not to be doubted but other ſorts of *Lima* would likewiſe thrive well in *Netherland*, in regard it doth endure and withſtand

the

the common Injuries of this Climate patiently; what makes this Tree acceptable is its Fruitfulneſs, and the pleaſant Lovelineſs of its Apples; which are fit and good to cool the immoderate Heat of Burning-Feavers.

CHAP. XV.

Of Adam's *Apple, or the ordinary Black Limon.*

THE Tree which produces the ordinary *Adam's Apple*, hath his Boughs armed with many long and ſtrong Prickles; the Wood is brittle and apt to break; grows in no good Form, and cannot but with great Labour be Shape.

be kept to a good Head; the Leaves are dark Green, of Fashion Oval or longish Round, a little Curled, and have many times at the beginning a little Hart or Foot, as the Orange Leaves; the Blossoms come forth abundantly thereon, larger then the Orange Blossom, within White, and without with reddish Streaks, weak of Sent; the Fruit is Roundish, a little dinted at the Top and below, twice as large as the common Orange, of a perfect Gold Colour; the outward Pill is a little rough and jagged, the inward Pill moderately thick, pleasant of Tast; The Pulp is of a Brimstone Colour, pleasantly Sowre, divided by eleven or twelve Veins or Partitions; These Fruits we have had here in this County in a fair and warm Summer ripe almost in one Year, as such happened 1670; the

the Tree is known to us by the Name of the Black Limon, becauſe the Fruits as ſoon as they wean, are of a black Colour.

It is the *Pomum Adami commune* of *Ferrarius, the common Apple of* Adam. Here in theſe Countries this Tree is common among the Lovers and Practiſers of this part of Husbandry, and is called in *Brabant* by the Gardiners the Citron Tree, but wrongfully, becauſe it hath no affinity at all with it: Among all the Sorts of Limons, this is the hardyeſt to endure the Cold of theſe Countries, and very forward in producing his Fruits, whoſe Juice is found to be very pleaſant in Meat; though *Ferrarius* ſeems to gainſay this in ſome Meaſure, yet Experience hath taught us otherwiſe. *Heſp. Lib. 3. Cap. 24.*

CHAP.

CHAP. XVI.

Of the Orange Tree in General.

Shape.

AMong the *Heſperial* Daughters and Virgins, *Heſperthuſa*, which is the Orange Tree, hath the greateſt Commendation and Praiſe, as well in reſpect of the Delightſomneſs of the Sight, as of the excellent Properties wherewith ſhe is endued.

This Tree grows to a fit height, though diverſly, accordingly to the Place and Air where the ſame is planted, the Root is thick and knotty, of a ſtrong Sent, and Yellowiſh; divided into many croſs-

croſs-ſide Branches, the Stock is firm and hard Wood, within White; the Bark is dark Green, mixed with an Iron-like Colour, the Head ſpreads itſelf into many Boughs, which at the ends are divided into many little Shoots and Spriggs; theſe Boughs are ſet with ſeveral prickles, yet they periſh through the Fruitfulneſs, and often Inoculating.

The Leaves are of a fair Green, Large, running ſharp together before, behind at the Stalk is a little Foot, which hath the likeneſs of a little Hart, out of which the great Leaf ſeems to come forth, and all full of many ſmall, and almoſt inviſible Holes, even as the Leaves of the *Hypericum*; and when they are rubbed between the Fingers, they give a ſweet and pleaſant Smell.

The Bloſſoms are as white as Snow,

Snow, made up of six or eight Leaves, beautified in the midst with small Strings, which are yellow at the end, between which the Product of the Fruit sheweth itself.

The Blossom which here in this Country appears in *June*, is strong, yet of a sweet and lovely Smell, especially in the Morning before the Sun is up, and in the Evening when the Sun is gon from them.

The Fruit is of a Saffron and deep Gold-Colour, of a round Form, the outward Pill is somewhat Rough, the inward Pill spungy, White, and of an unpleasant Tast: the Pulp is by several Films or thin Skins divided into eight Parts or Partitions.

These Fruits yield here in this Country no perfect ripe Seed, and grow not ripe in one Year, but require

quire twenty Months for it, and then they are not inferior to them of *Italy*.

That the Orange Tree is Fruitful and Longlived, teſtifyeth *Ferrarius*, when he relates of the Tree which is to be ſeen at *Rome* in the Monaſtery of St. *Balbina*, and hath ſtood there five hundred Years: The ſame Author makes mention of more ſuch, as among others, of the Orange Tree on Mount *Aventinus*, in the Dominican Monaſtery of St. *Sabina*, which is above four hundred Years old, and do yet every Year Bloſſom, and bring forth many Fruits. *Heſp. Lib. 4. cap. 1.*

Touching the place, whence the Orange Trees came firſt, it cannot well be related, being they are found in many Countries of the World, as well in the *Eaſt as Weſt Indies*, and eſpecially throughout all *Italy*, *Spain*, *Portugal*, Original

gal, and several parts of *France*.

Name. The Orange Tree hath its Original Denomination according to the Colour of the Fruit, which is a Gold Colour, and accordingly with other *Hesperial* Apples called *Aureum Malum*, the Golden Apple, or *Malus aurantia major*, the great Golden Orange Apple Tree.

C. Bauhin. Pinax l. 11. *Sect.* 4. For they being unknown to the Ancients, have not many strange Names, and they which be are these, *Nerantium*, *Rauwolf*, *Arangia*. *Cord. in Dioscor. Arangius. Cord. Histor.* and thus far enough of this.

What further belongeth to the Diversity, we shall describe in Order, for as much as we have experienced and practised in our own Gardens.

CHAP.

CHAP. XVII.

Of the Common Orange Apple of Ferrarius.

Hesp. Lib. 4. Cap. 3.

Ferrarius calls this in Latin *Aurantium Vulgare*, that is, the common Orange Tree, and hath three Sorts, distinct in the Taste.

For the first is Sowre, the second Sweet, the third of a Mixt, that is, of a Taste between Sowre and Sweet.

The sowre Orange, hath a sad pale and grainy Pill without, a sharp Smell, the Pulpe is Yellow, Sowre, divided by Skins into eight, and sometimes into nine Partitions. Shape.

I shall say nothing of the Seed here, because, as is mentioned heretofore, it doth not come in *Netherland* to perfect Maturity.

When these Apples hang on the Tree the Winter over, to the next Spring, they grow dry within, and the Juice or Sap returns back, to the further Nourishment of the new Fruits; therefore it is better (as well for the Trees as the Apples) to cut and take them off in due time.

CHAP.

CHAP. XVIII.

Of the sweet Orange Apple.

THE Tree which bringeth forth sweet Oranges, is in Shape not to be distinguished from the sowre, the Difference lyes only in the Fruit, which hath a thin, smooth, deep Yellow, and bitter outside Pill; the inside Pill is moderately Thick, of a Brimstone Colour, the Pulpe is full of sweet and pleasant Juice, divided into eight Partitions, by particular Skins or Films; this Juice returns not back again after the Winter, as that of the sowre Orange, but is much longer kept therein. Shape.

Hesp. l. 4. cap. 3. *Ferrarius* writes, that the Gardiners about *Genoa* have experienced, that the place where this Tree is planted or set, is much to be regarded, if it stands well to the Sun, that then the Fruit shall be of a pleasant sweet Taste; but if the place be shady, on the contrary Unpleasant, and all shall seem to turn or change into Bitterness.

The Mixed. Because the mixed Orange Apples are not to be distinguished by the outward or inward Form, but only by the Taste; it is thought needless to give a particular Description of them.

CHAP.

CHAP. XIX.

Of the Orange Tree with curled Leaves, of Ferrarius.

THis Tree is called by *Ferrarius Aurantium crispa folia*, that is, the Orange Tree with curled Leaves, and is described by none before him. *Hesp. Lib. 4. Cap. 5.*

The *Indians* call him, *Riffe the Poulle*: this Tree produces Boughs which at their further or uttermost Ends are set with many naked Twiggs close thrusted together, having short thick Leaves curled together, with a little Hart at the Stalk; (though some have none) at the first coming out of these Shape.

Leaves, they are ſharp, and become afterwards roundiſh, are of a weak Smell, and of a pleaſant and lovely green Colour; at the ends of the Twiggs the Bloſſoms come forth thick together as in an Heap; the Leaves of the ſame are a little curled to the outſide, and have all a ſweet pleaſant Sent; the Faſhion is as thoſe of the common Sort; the Fruit is like the common Orange Apple, except that the ſame is ſomewhat of a flat Shape at Top and Bottom. The outward Pill is almoſt of a Saffron Yellow, Roughiſh, a little Bitter in the Taſt; the inſide Pill is thin, looſe, unſavory; the Pulp is Yellow with a moderate Sowerneſs, pleaſant of Taſt, and is by ſeveral Skins or Films divided into eight Partitions.

This Tree muſt be diligently obſerved and looked unto, be-

cauſe

cause he is apt to grow fowl, and to decay by reason of the multitude of Boughs growing close together and cross one another; and brings forth more Boughs and Blossoms, then he can feed conveniently; wherefore the Pruning Knife must be used about him, if we will enjoy the Fruits, which are very Fair, and preserve the Tree in its Vigour and Strength.

CHAP. XX.

Of the Orange Tree with Rosed Fruit.

THis Tree, which is called by *Ferrarius Aurantium Rosæum*, the Rose Orange, doth not Shape. *Hesp. Lib. 4. Cap. 6.*

not much differ from the common Orange Tree to look upon, but only the Leaves are long and narrower; the Blossoms also are like those of the common Orange Tree.

The Fruit when it is full grown and Ripe, is of a convenient Size and Bigness, dinted a little before and behind, it shows a little Rose at the top, and about the Stalk are likewise some raised Particles, like unto a little Star, the outward Pill is of a pale yellow Colour, the inward Pill indifferently thick, somewhat Bitter; the Pulp of it is of a bright Brimstone Colour, divided into nine Partitions, of a pleasant tart Taste.

Thus have we found the same in our Garden in the Year 1672 exactly to Correspond with that of *Ferrarius*, and is here exactly delineated and described unto you.

you. This Fruit, is by reason of its Beauty worthy to be preserved, being the Fruitfulness, besides the largness of the Apples, increases the Esteem of the Tree.

CHAP. XXI.

Of the Orange Tree with speckled Fruit.

TO have the several Sorts and Varieties together, as much as is possible, the tender Plant is well worthy to be joined with the others.

This *Orange Tree* is in respect to the different Colour both of the Leaves and Fruits called by *Herrarius*, *Aurantium Virgatum*, and by us the *speckled Orange Tree*: It is much *Hesp. Lib. 4. Cap. 7.* Shape.

much tenderer then any other, as being not well able to endure the Cold; hath many tender Boughs which easily break; and spotted in divers places with some Brimstone coloured Streaks; the Leaves are in many parts lesser then those of the common Orange Tree, and have also on many of them several Brimstone coloured Spots, which is delightful to the Eye.

The Blossoms are like those of the Common, but smaller; the Fruit is, before it be ripe, orderly speckled with green and white Brimstone-like Streaks, and as by certain unequal Lines distinguished; when the Fruit is grown Ripe, then the green Streaks are Yellow, and the other turned into a Saffron Colour.

The outward part of the Pill is somewhat rough, the inward part of the Pill thick; the Pulpe of

of a Brimſtone Colour, diſtinguiſhed by Skins or Films into nine Partitions; which is of a pleaſant ſowre Taſt; the whole Apple is ſomewhat longiſh-round of Shape.

Here is to be obſerved, that all the Leaves and Fruits of the Tree are not of that variety of Colour, but only ſome; and was ſeen of us firſt with perfect ripe Fruits in the Gardens of the Sieur *John Roeters*, in his Lifetime Secretary of the City of *Amſterdam*, and with *Will Vanden Hewell*, both the moſt experienced and greateſt Improvers of this Husbandry of our Time.

CHAP.

CHAP. XXII.

Of the Orange Tree with horned Fruit.

Shape.

THis Tree is among all other Orange Trees the Loftiest to look upon, and the best to be ordered, here in this Country, as being the most hardy against the Cold, and the most Fruitful; it shoots high and large spreading Boughs; the Leaves are of a dark Green; larger and sharper at the End then those of the common Orange Tree; the Blossoms are of a pleasant Smell, and sometimes made up of many Leaves, even as if they were double; the Fruits have many wonderful Shapes,

Shapes, with points sticking out, and dinted Corners, representing the Fashion of a Man's Members, others of a Womans: Wherefore called also by *Ferrarius*, *Aurantium Hermaphroditum, Sive Corniculatum*, that is, the Hermophrodite, or Horned Orange; the outward Pill hath a fair Saffron yellow Colour, the inward Pill thick, spungy, of little Taste; the Pulp is included into ten or twelve, or sometimes more skinny Partitions, whereof some inclose the rest; the Taste is moderately sowre, not unpleasant; this Kind is desired here by many Lovers; and is found in many Gardens, where it is known by the Name of *Cloister Apple*. *Hesp. l. 4. cap. 9.*

CHAP.

CHAP. XXIII.

Of several Ill-shapen Fruits.

Hesp l.4. c.5.8.11

THere are found by *Ferrarius* several Orange Apples, which are noted by him as distinct Sorts and Kinds, as the *Aurantium dulci flore*; *Aurantium fœmineum, sive Fœtiferum, & Aurantium distortum*, all which I judge to be but one and the same, belonging to the foregoing Tree, viz. with the horned Fruit; for I have seen the same, and yet more different Shapes upon one Tree, also double Blossoms; for that happens often, and all this Variation of the Shape is

is nothing but a Diſplay of Nature.

We have obſerved the more the Bloſſom is doubled, and the more Leaves it hath, that the Fruit appears alſo in the ſtranger Shape; and touching the *Aurantium Calloſum* we have found on the common Orange Tree. The brawny or thick skinny Orange.

The ſame muſt alſo be Underſtood of the Limons, as I have ſhewed before in the ninth Chapter of this Book, in the *Limon Sbardonius*; ſo that in all this Variation, there are no ſeveral ſorts to be made, but muſt only be taken for Ill-ſhapen Fruits.

Here might have been ſhewed the Diverſity and Variety of imperfect Fruits, but it ſeemed needleſs to us, and judg that by this Obſervation is ſufficiently ſhewed what we are to think of ſuch Fruits.

CHAP

CHAP. XXIV.

Of the Sina *Apple, or the* Lisbon *Orange Tree.*

Hesp. Lib. 4. cap. 13.

FErrarius calls this Fruit or Plant *Aurantium Olysiponense*, or the Lisbon Orange Tree, because they were first brought by the Portugeeze thither out of *Sina*, and were thence sent into *Italy*, and other Countries besides.

Shape. This hath tender thin prickly Boughs, and Leaves long, running sharp together toward the End, which being rubbed, smell Sweetly.

The Blossoms are smaller then those

thoſe of the common Orange Tree; the Fruit is neatly round, of indifferent Largeneſs; the outward part of the Pill ſmooth and even, of a lovely yellow Colour, the inward part of the Pill thin; is for its pleaſant Taſt eaten together.

The Pulp, which is divided into nine Partitions, is full of Juice, and yellowiſh, of a pleaſant Sweetneſs, mixed with ſome Sharpneſs.

It is obſerved that theſe Fruits degenerate, as we may ſee by them that are ſent to us.

They of *Portugal* are the beſt in *Europe* for retaining of the pleaſant Taſt; their Gardiners inoculate them on the ſweet Citron Tree, and therefore thoſe Trees, which are from thence brought over hither, will not thrive well: thoſe of *Genoa* are leſs eſteemed,

and Grafted on Orange Stocks.

We have now ſome Years ſince got them, and for certain Underſtood, that they have brought forth Fruit perfectly Ripe; and we doubt not but we ſhall ere long enjoy the ſame likewiſe; becauſe the Luſtineſs and proſperous Growth of our Trees gives us great Hopes of it.

The Repreſentation of the Boughs, Leaves, and Bloſſoms made here, is according to our own Tree, but that of the Fruit according to the Outlandiſh Apple.

CHAP.

CHAP. XXV.

Of the Orange Tree with ſweet Pill.

THE ſweet pilled Orange Tree produces great and thick Boughs; the Leaves are large, thick, hard, and ſhorter then they of the common ſort, of a dark green Colour; the Bloſſoms are large, and ſpread themſelves broad and wide out, and abound in Multitude; the Fruit is great and weighty; the outward part of the Pill of a fair Saffron yellow Colour, pleaſantly Bitter; the inward part of the Pill is ſolid and thick, of a pleaſant ſweet Shape.

Bitterneſs (whence it is originally called the ſweet-pill'd Orange Apple;) the Pulp is of a brimſtone Colour, and moderately Sowre of Taſt, divided by particular Skins or Films into nine Partitions.

Of the Pulp, outward and inward Pill of this Apple tempered together with Sugar, is an excellent Remedy made againſt the Diſeaſes of the Stomach as *Ferrarius* reports of it.

Heſp. Lib. 4. Cap. 16.

And this Tree is by him firſt called, *Aurantium dulci Cortice*, that is, the Orange with the ſweet Pill; and is the *Malus aurantia cortice dulci Eduli.* B. P. & Cluſ. Hiſt. *The Orange Tree with ſweet Pill*: and certainly worthy to be Husbanded, as well in reſpect of the Fruit, as alſo of the Luſtineſs of the Tree, which is ſufficiently Luxuriant in Growing.

C. Bauhin. Pinax. l. 11. Sect. 6.

The

The Brabanders wrongfully call this Apple, *Pomum Adami*, *Adam's* Apple, as may be perceived by the Deſcription of the right given in the fifteenth Chapter of this Book.

CHAP. XXXVI.

Of the Orange Tree with ſmall Fruit.

THis ſmall Orange Tree is called by *Ferrarius Aurantium Sinenſe*, and is the *Malus Aurantia humilis* of *Bauhinus*, and *Cluſius*, commonly called the Dwarf; it hath little ſhort thick Boughs cloſely growing together. *Heſp. l. 4. cap. 15. C. Bauhin. Pinax. l. 11. Sect. 6.* Shape.

The Leaves are like thoſe of

the common Orange Tree; but in all their Parts much ſmaller, and ſharp forward.

The Bloſſoms (which it produces in abundance,) are alſo as it were, compacted and in Cluſters; and are in Form like unto thoſe of the other Sorts, though not ſo large.

The Fruit is of the bigneſs of a Walnut; the outward Pill is of a Gold Colour, not very Bitter, the inward Pill thin; and the Pulp is diſtinguiſhed into eight Parcels; of a pleaſant ſowre Taſt.

This Plant is very delightful to the Eye, and that in reſpect of its abundant Fruitfulneſs, which is alſo the cauſe of its being ſhort-Lived, if ye do not provide againſt it, by taking away the ſuperfluous Bloſſoms and Fruits.

Hitherto now have we been buſied to deſcribe all ſorts of Fruits,

Fruits, which as yet are to be found in our Netherlandiſh Gardens, and mentioned by *Ferrarius* in his *Heſperides*, whom we have alſo followed, as agreeing with our Experience; and having obſerved many Variations, whether the ſame takes Original from our Ordering, or otherwiſe, we ſhall ſufficiently know the ſame if we will compare our Deſcriptions and Repreſentations with them of that Author; and hope further, that by the Diligence of thoſe who Affect or Delight in theſe Plants, more new Sorts and Kinds may be brought into our Countries.

CHAP.

CHAP. XXVII.

Of the Difference in the Ordering of the Limon and Orange Tree.

BEfore we proceed to the common Ordering, I thought fit to ſhew here the Difference between the Raiſing, Propagating, and Nouriſhing of the Limon and Orange Tree; it hath its beginning hence.

Firſt, That the Limon Tree is found leſs hardy to endure the Injuries and Cold of our ſharp and harſh Air, than the Orange Tree, becauſe the Wood is ſofter, and not ſo firm and cloſe by much: There

There is alſo a Difference among the ſorts of Limons.

For there are none which can better endure the Miſeries and Hardſhips of our Climate, then thoſe we have deſcribed by the Name of common *white Limons*; the *Adam's Apple*, called the *black Limon*, wherefore they are moſt beloved by our Affectors of this part of Husbandry, raiſed and propagated.

But we have ſhewed that yet more ſorts of Limon Trees may be brought to Fertility, as the Deſcription heretofore given doth Demonſtrate. Further, The Managing and Ordering is one and the ſame; beſides that the Trees which bear ſweet Fruits, require a place which ſtands well to the Sun, that the Apples may thereby come to a better Concoction, and more pleaſant Taſt, which

Above 1. Book / Chap. 7. & v. 15.

which ſhall not be, if we do the contrary.

Secondly, Is yet this, that we in Propagating uſe none, but the Seed of the Orange Tree, becauſe it can better endure the Cold of theſe Countries, as is ſaid before. Even in *Italy* are the Seeds of Limons ſeldom Sown, becauſe of their tenderneſs and weakneſs; For all Limons, which do readily take in the Orange Stock by Inoculation, are Fruitful, and more hardy againſt the Cold, and all other Injuries, then if they were Grafted on their own Stocks.

CHAP.

CHAP. XXVIII.

How we get theſe Trees out of others Countries.

IT will not be amiſs to ſhew how thoſe *Heſperial* Trees are come by in theſe Countries, for thoſe that have not Patience to ſtay for them by Sowing of them.

Here is to be obſerved Time, and Place, and Manner how we are to handle them. Time.

It is firſt neceſſary, that the taking them up and ſhipping be done in the Months of *December*, or at furtheſt in *January*; that in *May*, they may be Unpackt, and Planted; for if it be later in the Summer,

mer, there is great Danger, and we run great Hazard of losing the Trees, or at least we are much behind-hand to make them Grow.

Place. The place whence they must be fetched, is St. *Remo*, Situated by or upon the River *Nervi*, whence they are brought to *Genoa*.

We must bring no Trees out of any other Climates to Plant or Order here in our Netherlands, because the Condition of that place, doth, above all other places in *Italy*, agree best with our Climate, as lying about forty three Degrees Altitude be-North the Equator.

Secondly, The best and most experienced Gardiners of all *Italy* are found there; neither come there streighter Stocks, nor fairer Fruits then out of this *Hesperides*.

If Trees be brought out of any other Countries, as *Spain*, or *Portugal*,

tugal, it will certainly be in Vain and to no Purpoſe; becauſe they cannot well endure our cold changeable and uncertain Air.

When now the Orange or Limon Trees are taken up, at the ſaid time, with a good lump of Earth about the Root, they muſt be provided with Turf, or earth Moſs, that the Maſs may continue whole, and no Earth fall off. Ordering.

Let them be packt with the whole Head, eight or ten, more or leſs, according as they are in Bigneſs, in a ſugar Cheſt, covered and ſet into the Ship in an airy place; and ſo they may keep good ſix or eight Weeks; but the ſhorter the Voyage is, the better.

Here muſt we be Cautious, that Care be taken, there be no opening, nor any Holes made in the

the Chests, left the Rats, which often are many in Ships, spoil the Stocks, for we have had the Experience hereof to our Sorrow, that the Barks have been eaten round about from off the Trees, whereby our long Expectation was frustrated: And this is what concerneth the Transportation out of *Italy*, whereby our *Hesperia* hath taken her first Rise and Beginning in Netherland.

CHAP. XXIX.

Of the Placing of the Limon and Orange Trees.

THey that will Order and Husband these Trees aright, must first make a good Choice of a fit and convenient standing-

ſtanding-place, where they muſt be continued all the Summer.

To which end we muſt prepare in the Garden a Conveniency to the South, or South Eaſt, and if it be poſſible, right before the winter Place, or green Houſe, and in caſe the Sun be very hot, as ſometimes it is in *May*, make choice of a Place which hath a little Skreen of ſhady Trees before it; for generally about that time the Trees be a little Sickiſh; which if they are, they will not endure the full heat of the Sun, by which ſometimes ſeveral Plants have been loſt; for this there muſt remain a Space of 25, 30, or more Feet wide, according to the Meaſure or Largeneſs of the Ground or Garden.

It will be very Uſeful that this Place be fenced about fourſquare, with an Elder Hedg, or other

Fruit

Fruit-Trees twiſted together, and raiſed high, to prevent and take away all acceſs of the Wind: In this manner may an open airy Shelter or warm place be made, which is very acceptable to theſe tender Strangers, there to receive the Beams of the Sun, which comes to recreate theſe *Heſperial Virgins* between the fruitful Fences, and cauſe one with another, a Mixture Pleaſant and Delightful to the Eye and Sight. The Summer Placing muſt be taken, if it be poſſible, to the South-Eaſt; and above all, reject all the Weſt, South-Weſt, and all the Parts of the North, becauſe many great Storms, filthy Vapours, and hurtful Winds do frequently proceed thence; which even our own country Fruit cannot endure, much leſs theſe; and therefore muſt they, as much as is poſſible, be

ſhut out; that no Diſtemper, or loſs of Leaves, to the great Prejudice of the Growth, may be cauſed; for without ſuch a fit ſtanding Place, we ſhall in vain expect to raiſe and to bring theſe Trees and their Fruit to Perfection.

We find by many unskilful Practitioners and Managers in this affair of Husbandry, who take no care for the ſtanding Place, that they commonly are furniſhed with pining and unthrifty Trees; Wherefore then the Warmth and keeping of the Wind from them is highly neceſſary, as alſo the Choice of the ſaid Situation, which is obſerved even in *Italy*, and muſt therefore much more in theſe our Countries.

If it be poſſible, and the Conveniency permits, that this placeing of the Trees may be before *Ferrar. Heſp. l. 2. cap. 6.*

the winter or green Houſe: we ſhall find that theſe ſweet Perle-Hills ſhall not only fill the Eyes of their Maſter with a glorious Sight in the time of Blowing, but alſo repleniſh and fill his Parlour with a moſt fragrant and pleaſant Smell through the opened Windows.

CHAP. XXX.

Of the Mold, Earth, and Dung.

DIvers ſorts of Earth may be uſed in the Ordering of them, as the daily Experience teacheth, that every one may help himſelf according to the Condition of his Habitation.

In *Italy* about St. *Remo* is found a yellow, fat, and heavy clay-Ground; the Brabanders have ſandy

ſandy and gravelly clay Ground, and about *Haerlem* in *Holland* the Gardiners uſe a well dunged ſandy Ground, wherein theſe Trees do bring forth their Fruit in too luxuriant a manner.

In ſhort, we may at all times prepare a fit Mold, with Sand, Earth, and Dung, wherein theſe *Heſperial* Plants ſhall thrive moſt luſtily and petulantly, if old rotten Dung be not wanting therein.

It is certain, that the purer the Dung is, the better it is; we uſe a well dunged Earth, with white and ſoft Sand mixt together.

For the preparation and fitting of this Ground, all Earth or Sand is not alike fit; the toffe Clay, becauſe of its Coldneſs, muſt be rejected, and another Earth choſen, which is brown, ſoft, luſty, ſweet, fat, and of a good ſweet Smell, which we may try by letting the

Earth ſtand ſome hours in ſweet Water; now if the Water keep its ſweet Taſt and Smell, it is a ſign of good and fit Earth, whereas otherwiſe it is contrary; and Sand is neceſſary to it, according to this Preſcript:

Caſ. Sorgh. 2. part.

White fine and ſoft Sand duly prepared,
Gives Fruits, when laid on with Reaſon.

The forementioned Earth, Sand and Dung, divers times digged together, muſt lye the whole Winter, to be frozen thorough: When the Froſt is done, it ſhall be wrought together divers times, to uſe it; which then will be ſerviceable and uſeful for the Work.

Ordering of Plants, *l.* 11. *c.* 2.

The Preparation of the Sieur *Munting* is unneceſſary to Rehearſe, who makes his Mixture of ſixteen Parts and Ingredients, becauſe it can be done of leſs.

The

The Dung that is here required, muſt be of Cowes, Horſes, or Sheep, according as it can be got; no Man needs to ty himſelf ſtrictly to it, one of the three is ſufficient; if it be but obſerved that the ſame be not too new and freſh, but old, the ſharpneſs thereof being well ſpent and rotten.

I know that there are yet other things uſed for Dung, as of Hens, Doves, Shavings of Horns, Lupins, and the like; but to us the plaineſt way ſeemeth beſt, and Caution every one againſt the coſtly Preparation which ſome make, and uſe as one *Species*, Kind, of Dung to force the Orange Trees out; which is deſcribed by *Munting* in his Ordering of Plants in theſe Words. *Ibid.*

Take Pidgeons Dung, or Sheeps Dung, not too old, as much as you will, or of both a like Quan-

tioy, put it into a Glaſs, ſet it in the Sun, and pour Rain-water upon it; when the Strength thereof is drawn and gon into the ſame, then pour off that Water, and put a little freſh Rain-water to it, wherein a little bit of Salt-peter hath been ſteeped or ſoaked four and twenty Hours: Water therewith your Trees ſometimes, and you ſhall find a wonderful forceing Power in the ſame, &c. Hitherto *Munting*.

Certainly I can by no means judg ſuch a forcing about this Work for good; Whereof we have ſeen an Inſtance at *Amſterdam* in the Year 1662, with the Sieur *Paulo de Rageau*, who alſo uſed ſuch Water, wherewith he watered his Trees, and forced them thereby ſo ſtrongly out, that they blowed abundantly, yet produced but little Wood and Fruit, and the following

following Year the good Gentleman found, that moſt of his Trees were ſpoiled, and ſome quite dead.

We do then with Reaſon reject theſe Preparations, which bring more Hurt then Profit to their Practitioners; but deem it beſt to follow the ordinary Way, leaving all artificial Preparation of Dung and Earth, and uſe a Ground endowed with all good Properties, which we may ſufficiently diſtinguiſh by Feeling, Smelling, and Seeing, from the mean and bad.

CHAP. XXXI.

Of the Sowing of Trees.

THE Sowing of Orange Kernels doth in theſe cold

Countries require much time, before they come to be Trees, yet this is done by many Lovers with Advantage, especially in *Brabant*, where be divers Persons, who by following this yearly, have obtained great and fruitful Nurseries, and hereby excited others to the same Inclination.

To do this Sowing well, we must make Choice for it of the Seed of Oranges, not of Limons, much less of Citrons, as being too tender, according to the Testimony of *Ferrarius*; the Limons Seeds are seldom sown in *Italy*, because they cannot well resist the Hardships; then is it much more Unimitable in these Climates.

Hesp. Lib. 3. Cap. 29.

He that will begin this, must make Choice of the fullest, best, and ripest Seed, of fair perfectly ripe Oranges, as they come out of *Italy*, *Spain*, or *Portugal*; wash the same

ſame with Rain-water, and make them clean from all Corruption and Dirt, and afterwards dry the ſame three or four Days in the Shade, in the beginning of *May*; and according to the ſaying of *Ferrarius*, we muſt ſow them two Days before the full of the Moon, after this manner, and fill to that end a Pot with good fat and ſifted Earth, put the Seed therein an Inch deep, and two good Inches breadth aſunder; ſet the Pot to the South, in an open airy Warm, and to the Sun ſtanding place, and ſprinkle this you have ſown immediately, with lukewarm Rain-water, and alſo every third Day; yet this Earth muſt not be too wet, but only moderately kept moiſt. *Heſp. Lib. 2. Cap. 8.*

To further the ſpringing out, Glaſſes muſt be put upon the Pots, which will exceedingly forward the Work. In

In the ſpringing up of the Seed it happens many times, that the Shoots come forth double, *viz.* two together; theſe Twins muſt we part, pull out the weakeſt, that it may not hinder and take away the Nouriſhments of the other.

Theſe young Seedlings are frequently troubled with Earwiggs, Ants, Snails, Woodlice, which eat the ſame off, and hinder their Growth, wherefore there muſt be Proviſion made againſt them: At the third Year muſt every Seedling be tranſplanted particularly and ſingly by itſelf in a Pot, in good Earth, and put in a place as before, where they may be free and ſafe from all bad Winds. Without any Oppoſition or Hindrance they ſhall be at five Years old a Finger thick, fit for Inoculation; and in the twelfth Year, or leſs alſo, bring forth Fruit. This

This is the Ordinary and certaineſt Way of ſowing, whereby we may nurſe up and raiſe theſe Trees, and from their beginning uſe them to the enduring of Injuries and Hardſhips, which may happen to them through the Inconſtancy of the Climate.

Againſt the forcing of Orange Seed.

By the art of Sowing in freſh Horſe-dung may theſe Seeds be made ſpeedily and ſtrongly to ſprout out: When the Seed is firſt ſoaked in lukewarm Water, wherein freſh Dung and a little Salt-peter hath lain aſteep; as we have ſeen at *Nortwyck* in *Holland*, at Sieur *Borels*, that he made Orange Trees grow in one Year from Seed to the height of two Feet, and a Finger thick, fit to Inoculate the next or ſecond Year: But aſſoon as the Sun did recide to the South, and declared unto us the approaching Winter; theſe tender

tender Nurſlings began to Mourn, as unaccuſtomed to the uſual Severity of our Harveſt and Winter Showers, which ſurprized them as being Unarmed and Unprovided againſt this Evil; and withal ſpoiled them of all Health and Thriftineſs; whereupon Death at laſt followed.

This Forcing is good for all Forreign Seeds out of hot Countries, to dry the Plants that come forth from them to an *herbarium Vivum*. But is by no means adviſable about the Sowing of Orange Trees, in which we muſt keep to the Way and Manner above Mentioned.

CHAP.

CHAP. XXXII.

Of Ingrafting.

THE Propagation of Fruit is moſtly done on a three-fold way, by Ingrafting, Ablactation, and Buding, otherwiſe called Inoculating.

To do this well, the Stock which is to be Grafted or Ingrafted, muſt be ſtrong and ſufficient in Growth, that the Cyon put in may not want Nouriſhment.

To which end a fit Bough or Branch is to be choſen to cut the Cyon from, (whether it be a Limon or Orange Tree) which is neither too Old nor too Young; for the Old is unfit, and the Young too tender.

That we may not miſs here, Time.

we

we muſt chuſe Wood of two years Growth, becauſe that of one year is too tender; cut the Cyon in the Month of *May*, to the length of two Buds; part under the loweſt Bud ſhall be cut with a ſharpe Knife on both ſides ſomewhat flat, yet ſo that the moſt outward part of the Bark may not go off, being it muſt again Unite with that of the Stock.

After the cutting of the Cyon, the Stock muſt be ſawed off at a convenient height; and obſerve that the Bark be not bruiſed, but be ſmooth and even: Then make a Slit in the top of the Stock, with a ſharp Chiſſel (and put therein a Box-Tree-wood-Wedg, that the opening may not ſhut again) put then the Cyon in from the Top downward to the loweſt Bud, ſo that the ſame ſticks out a little above the Stock; cloſe the Work toge-

together; ſo that the outmoſt Bark of the Cyon doth exactly anſwer to the outmoſt Bark of the Stock; guard the Slit with good grafting Wax againſt the Inwatering, and other Inconveniences: On this manner may we Graft upon high Stocks, and upon particular Boughs, to make ſeveral ſorts of Fruits, as well Limons as Oranges to grow upon one Tree, which may likewiſe be done by Inoculating.

Then at laſt Care is to be taken that the new grafted Cyon may have the full Nouriſhment, and be not robbed by the wild Sprigs ſhooting forth. Which is moſt elegantly deſcribed by *Virgil*, *Georg. lib.* 2.

By means of Grafting we have ſeen the wild Orange Tree bettered, but it often fails.

But the Limon Tree grafted into the Orange Stock, is more ſure, and will better Unite.

Grafting

Grafting is ſeldom uſed in theſe Trees, except out of Curioſity, for it makes moſt unhandſom and ill-ſhapen Stocks, and is therefore by the Practitioners but little uſed.

Of Ablactation or grafting by Approach.

Beſides the foregoing Grafting, is Grafting by Approach or Ablactation, or of Sucking, ſo called becauſe the young Shoot is ſucked off from the Mother, or principal Trees.

We have ſeen it with *Hercules Patronus* at *Zutphen*, who was very experient in this Ordering and Managing, and hath happily performed and executed both theſe Ways of Grafting, and Ablactation.

This is done in the Month of *May*: Make choice for it of an Orange Stock, luſtily Flouriſhing, and ſtrong in Growth, place him in ſuch manner next to the Tree from which is to be ſucked, or the

Ablacta-

Ablactation to be made, that the Boughs or Branches can eaſily reach, or fully touch with their outmoſt ends the uppermoſt Top of the Stock, placed or poſited by; which ſhall be ſawed off even and ſmooth, at ſuch an height as we deſire; and therein is a Slit to be made, even as if we would Graft; then ſhall the Shoot or Twig be cut on both ſides, flatwiſe, under the ſecond or third Bud, after the ſame manner as is ſaid before of the Cyon: Beſides it muſt not be parted from the Bough, but left on, and joined from behind in the opening of the Stock, ſo that the outmoſt Bark of the cut Graft doth rightly correſpond and anſwer with that of the Stock; which muſt be ſecured with grafting Wax, as alſo againſt all ſhaking and moving by the Wind, that the perfect Union and

Cure may be made, which may be helped by placing a ſtick or two by it, and by binding the ſame thereunto this Inconvenien-cy is prevented, the tender Sucker is ſaved from breaking, and the putter-in from Prejudice.

And after this Ingrafting hath taken, and is well United, then ſhall the new ſhot Graff be cut off cloſe to the Stock of the Mother, that henceforth it may ſuck and draw its own Nouriſhment.

Inoculation. Among all the ſorts or kinds of Grafting which may be uſed about theſe Plants or Trees, there is none more proper to their Nature then Inoculation, or Grafting with the Bud; and that in reſpect of the hardneſs of the Wood; wherefore they will not well endure the two foregoing ways.

This Work was very famous among the Ancient, whoſe Pre-

ſcripts

ſcripts are Collected together by the learned *Mizaldus*, and therefore needleſs here to Rehearſe; but only the Modern Handling and Uſe which is approved by Experience, and received by every one. *Opuſcul. de arborum inſitione.*

To do and perform this, the time muſt be obſerved; in the Month of *July*, in the Wain of the Moon, in fair Weather, when it is neither miſty, nor rainy, muſt this work be done. *Ferrar. Heſp. Lib. 2. Cap. 8.*

Make choice of a flouriſhing Shoot of two or three Years old, of a thrifty Tree, whereof ye deſire to Inoculate, and to cut the Bud or Oculation, whether it be of a Limon or Apple Sina, ſeek a Bud which hath no Thorns to it.

After the ſaid Twigg or Shoot is cut off, take a ſharp little Knife, and give the Bud choſen on each ſide a cut to the Wood, and un-

der and above the Bud, which remains in the middle a Cut likewiſe, that in Form it is like a longiſh ſquare little Shield; lay the ſame off with the point of the Knife, or with the Thumb or fore-Finger, yet ſo that the Bud or Eye remains faſt to the little Shield, and the ſame be not Rent; for otherwiſe it will not be good; the Leaf faſtned below to the Bud ſhall be tipt about the middle, to guide the little Shield in the ſetting in.

The little Shield may yet in another manner be taken off; when (as is above ſaid) cut, we ſhall lift it off with a Knife, ſo that a little Wood remains to the Shield, to keep the Bud the more ſafe; though this ſeems to be contrary to the common Rule, yet have we often found it good, and ſeen it more eaſily done then the foregoing. This

This was firſt made known to me by the moſt experienced Sieur *John Roeters*.

The little Shield or Oculation lifted off, being approved, we ſhall keep the tipt Leaf between our Lips, (yet not ſo as that it becomes wet) till the opening of the Stock be made after the following manner.

Chuſe for it an even ſmooth place, which hath neither Bump nor Knot; make the Cut or Inciſion through the Bark to the Wood, a little longer then the bigneſs of your little Shield, in the form of a Latin T, or like the modern Italian Gardeners have in uſe, as this Sign ſheweth ⊥, as appears by the Limon and Orange Trees, that come out of thoſe Countties; but which way ſoever the Cut or Inciſion is made, it is all one, becauſe it makes no

difference in the Growing. Afterward lift the Bark up eaſily with a bony Knife, part the ſame on both ſides from the Wood, take the Oculation by the Leafe which is left to it, join the ſame duly and conveniently between it, within the Cut againſt the Wood, thruſting the outmoſt Bark a little, that the Oculation may be, as it were, well and evenly clapt to the foreſaid Wood.

And it is to be obſerved, that the top of this little Shield muſt touch to the uppermoſt againſt the croſs Cut, *viz.* when it is like the Latin T: But if on the contrary it ſtands after the Italian way, the loweſt part ſhall touch it, the little Shield or Oculation being well put, muſt be carefully tyed either with a dry Ruſh of a Muſcovian Mat, narrow Tape, or any other ſoft String, beginning

ning from above the Oculation, and ſo downwards, making the Binding to ſhut before, even under the Bud or the Stalk of the Leaf that is left on: then wind on till the whole Cut or Inciſion, beſides the Eye, which may not be covered, be wound up.

We muſt preſerve this Work with great carefulneſs againſt Rain and Inwatering, that it may not be ſpoiled, becauſe nothing is more hurtful to the new inſet Eye; wherefore thoſe Trees are ſet under ſome Shed or Shelter to that end.

The Binding ſhall ſtand about three Months, till ye ſee the Oculation hath taken, and the Bud begins to ſwell; then the Binding is to be looſened a little.

Let this Work ſtand all Winter to the Spring, and when in the Month of *April* the Oculation is

yet Green and Thriving; then it is good, and there is hope of Growing, and ſhall doubtleſs ſhoot out in *May* or *June*; but before it comes thus far, and as ſoon as we perceive that the Bud is good, and makes it ſelf ready to ſprout out, we muſt Cut or Saw the Stock off two Inches above the Oculation, that all the Sapp and Nouriſhment may come to the new Nurſe-Child, and the Shoot the more ſtrongly put forth: When the ſame, the following Year, is ſtrongly ſhot, then take the reſt of the remaining Stock away to a little above the Inoculation, and cure the Wound with Grafting Wax.

If the Oculation be put upon an high and ſtreight Stock, we ſet two or three, or four Oculations round it, to make a good and regular Head: But if the Stock be maimed

maimed and ſlight, we put the Oculation at the bottom of the ſame, not far above the Ground; for then by means of this Inoculating we may raiſe ſtreight and fair Trees; as we ſee this among the Practitioners in *Brabant*, who chuſe for this thoſe that are flouriſhing and thrifty, which can ſhoot in one Year three Foot high and more.

We muſt not pluck off the Leaves which ſtand along the new ſhot out Sprout, or Twigg, but leave them on till they fall off themſelves; for by the Leaves is the Sapp kept in full Strength and Vigour from the bottom to the Top.

Theſe tender Shoots may be kept ſtreight, by putting a Stick by them, and with binding ſo ordered, that thereby the Platform is laid for the bringing forth

forth of fair and ſtreight Trees.

For according to the ſtreightneſs and fairneſs of the Stock, we do here in this Country many times eſteem the Tree, and this is the means to bring them to it, from their Youth while they are tender.

To Inoculate is none of the leaſt Delights of this Practiſe, for we do ſomething that ſeems almoſt unconceiveable, that an whole Tree is forced by means of a thin little Shell, and a ſingle Bud, to leave and change its own Nature, and to bring forth other ſtrange Fruits.

It would be convenient here, and ſuit well to ſhew how this Union is made, and this great Work performed in a ſmall Compaſs, how a Tree is compoſed of little Particles, which are like many thin Fibres, or thin Strings, along

long which, through inviſible Pores and Paſſages, the Nouriſhment, which partly conſiſts in Moiſture, aſcends, where it ſpreads itſelf through the Branches, and by means of the outward Heat of the Sun, and Innate, or natural Warmth within, produces the effects of Leaves, Bloſſoms, and Fruits.

Theſe long thin ſtringlike Paſſages (whereof the Bark is wholly compoſed) being cut aſunder, as they alſo of the Oculation, whoſe openings coming then again right upon one another, the Moiſture and Nouriſhment of the Stock is communicated to the Cyon, and through the growing Virtue joyned and united together. We ſee the contrary comes to paſs, when this Agreement and Correſponding of the Paſſages fails, by miſplacing of the ſame.

Yet

Yet it is not our Intention and Design here to Reason and Discourse of this Matter; but we recommend this to the great Wits of Naturalists, and keep our selves to the simple Ordering.

We may by Inoculating come to much Variety of Fruits, if we be but provided and furnished with Stocks and Seedlings.

CHAP. XXXIII.

Of Propagation by Inlaying.

EVen as in all Creatures there is by Nature a Propagating Property, so likewise is the same in Trees, which are not only multiplyed by the Seeds, but also by the Sproutings out, and Suckers below at the Roots.

To further which, Art hath not

not a little added and Contributed to it, *viz.* by Inlaying, or Offlaying.

We have before treated of Sowing; and the other is now our preſent Talk, wherein we muſt know,

Firſt, That an Orange Tree doth ſeldom ſprout out at the Roots; and the Inlaying of the Boughs, by reaſon of the hardneſs of their Wood, cannot well be brought to Shoot and to take Root; though ſome ſay that ſuch may be done, and among others the Sieur *Munting* in his true and right Exerciſe of Planting. For me, I could never attain to it. *Lib.* 1. *Cap.* 2.

But this Propagation may more fitly be done to the Limon Tree, which is of a ſofter Wood, and is more apt to ſhoot out at the Roots, eſpecially when the Oculation ſtands cloſe by the Ground;

Ground; whether it be then, that the Inlaying be done above from the Head, or from beneath near the Ground, give the Bough a Cut from the Bottom upward; then take a Pot, in the Bottom or Side whereof is an Hole, put the Bough therethrough, and order that the Cut or Inciſion may come into the middle of the Pot; lay between the cutted Opening, or Slit, a little flat Stone, or ſomething elſe, that it may not ſhut too cloſe together, but keep open, to further the Rooting ſooner.

When this is conveniently placed and ſet, we muſt fill up the Pot with good Earth, and keep it moiſt with moderate Watering: after the ſecond Year we commonly find that it is rooted; which when it is fit and ſtrong, cut off, to nouriſh itſelf, and then to be Tranſplanted.

Here

Here is to be obſerved, when the Pot, whether it ſtands to the Head, or below upon the Ground, muſt be faſtned, for the leaſt Motion which happens to it, is prejudicial, and cauſes a fruitleſs and loſt Labour.

Theſe of laid Trees, (when they are of a good and fruitful Bough) ſhall produce as fair Limons as an Inoculated Tree, as Experience hath often taught us, and likewiſe withal we may eaſily multiply Limon Trees on this wiſe.

There are yet otherways of Propagation deſcribed by *Ferrarius*, but the Execution is Unpracticable in *Netherland*, becauſe of the ſhortneſs of our Summers. We therefore omit all the reſt, ſeeing thus may be done whatſoever can be deſired from the other ways. *Heſp. Lib. 2: cap. 11.*

CHAP.

CHAP. XXXIV.

Of Planting, and Tranſplanting.

A Double Handling comes here to be Conſidered; the Planting, and Tranſplanting.

The firſt is done to Trees, which are brought to us out of *Italy*; and the other to thoſe which ſtand here in theſe Countries in full Growth.

Before we come to this, it will be uſeful, that the neceſſary Inſtruments be propoſed, becauſe without them we cannot begin.

Of Tubs & Boxes.

It is not practicable to Plant the Heſperial Trees in theſe Countries at large in the free and natural Ground, as they do in warm Climates; wherefore Art hath invented wooden Tubs, Boxes,

Boxes, and earthen Pots, wherein the Trees are Planted, Removed, and Tranſported. Though theſe Trees are by ſome Lovers planted at large, or in free Ground, yet it is rejected for theſe Reaſons.

Firſt, Becauſe of the great Charges, which this Work requires, to defend our tender Plants againſt the Cold; being there is a winter-place, or green Houſe required thereunto, which is taken away in the Summer, and in the Winter ſet up again; as ſuch an one is deſcribed by *Ferrarius*, and found in the Garden of the *Duke of Parma*; but it would be too Chargeable for many to perform and make ſuch.

Secondly, Becauſe the Grounds are here in the winter-Seaſon very Moiſt, and accordingly Cold, which is very prejudicial to the

Trees and Fruits; Wherefore we, to avoid all this, ſhall follow our Predeceſſors, who have for many Years found out Tubbs, Boxes, and Potts for this, which are all to be taken according to the bigneſs of the Trees.

Tubbs. The beſt and fitteſt Tubbs are made of Rheniſh-wine-Fats, or Casks, becauſe their Matter is hard, thick, firm, and good Oaken Wood; the Hoops muſt be Iron Hoops, and have on each ſide a ſtrong Iron Handle, to carry them, or remove them conveniently from one place to another; the Depth and Width above is ordinarily two Foot, but at the Bottom one Foot and an half: ſo that the Narrowneſs muſt go ſlenting downward, and leſſen by little and little, becauſe in the Tranſplanting of the Trees, the whole Maſs of Earth may be the more conveni-

conveniently taken out; and if we deſire Tubbs for leſſer Trees, let the Depth and Width above be one Foot and a half, and the Diameter or middle Line of the Bottom, one Foot and a quarter: and ſeveral Holes muſt be bored or made in the Bottoms of the Tubbs, and Pots, and Boxes, to empty the ſuperfluous Moiſtneſs, and to free the Roots of the Trees from rotting.

The Pots muſt be made of good Earth, glazed within and without, or not ſo, according as every one pleaſeth and deſires; the Form and Faſhion muſt be almoſt like the Tubbs, wider at the Top then at the Bottom, the Foot broad, to prevent the falling down.

Concerning the ſquare Boxes, they are not in all particulars held ſo good, and are more chargeable,

wherefore we thought it not neceſſary to ſay any thing touching the ſame; nor of the other things neceſſary to the Planting, as Spade, Shovel, Trowel, and the like, in regard they are ſufficiently known to every one as to their Form and Faſhion. Only this muſt be added, that wooden Tubbs are counted better then earthen Potts, becauſe the Roots ſhoot round againſt the Sides of the Pots and Tubbs, alſo upon the Bottoms of the ſame; and ſo it is, that the Earth being much colder then the Wood, doth conſequently hinder the Trees more, eſpecially in the Winter.

In the beginning of this Chapter is ſpoken of a twofold Planting; we ſhall now treat of the firſt, *viz.* Of Trees which are new brought over out of *Italy*, or other Countries.

When

When we have got them in convenient time; preſently after the Unpacking, ſhall all the Earth, which is about the Roots be clean taken off, waſhed, and cleared from all ſtifled and dead Fibres and Stumps; and the whole Head ſawed off too within an Hands-breadth above the Inoculation, and the remaining Tops covered with grafting Wax. How we are to uſe thoſe new got Trees,

Take then further, a great Tub with Rain-Water, made Lukewarm in the Sun, and let the Trees ly therein one or two Days, that they may, by ſucking of the freſh Moiſture, in ſome meaſure Revive again, after the long continued Draught and Hardſhips they have ſuffered in the Voyage, and afterward Plant them in this following Manner.

Chuſe Potts or little Tubs, according as the Bigneſs of every Planting

Tree ſhall require; fill them with good Earth two or three Hands Breadth deep, put the Tree in the middle of it, add more fine ſifted Earth to it, preſſing the ſame a little down; and in the filling up, ſhake the Stock up and down, to the end the Earth may the better ſink in between the Branches of the Root, and the Tree ſtand faſt and firm.

When now the Pot is conveniently filled, put the ſame for ſome Days in a ſhady warm place, on which the Sun doth not ſhine; let the ſame ſtand ſo long there till the Bud begin to come out: On this manner ſhall we accuſtom the Trees to our Climate, which by degrees are to be ſet further and further in the open Air and Sun; in the mean while the Earth is but moderately and not overmuch to be watered, to reduce

Watering.

theſe

theſe ſick ones to new Strength a-gain.

As ſoon as we begin to ſee the firſt ſhooting out, it may be furthered by putting Glaſſes over the Oculation; and taking care that no Cobwebs come to it.

It muſt be further obſerved to the Nurſing up and raiſing, that the Vermin do not eat off the tender and firſt Shoots that ſprout out, for hereby is cauſed not only a backwardneſs and retardation in their Growth, but alſo after a long pining Conſumption, the Death it ſelf of the Trees; but if this Work be managed after the foreſaid manner, the Trees ſhall be fit at the fifth Year to bring forth Bloſſoms and Fruits.

There be ſeveral Reaſons, which force us to Tranſplant the Limon and Orange Trees. Tranſ-planting

Either becauſe the Pots grow

too little, the Tubs rott, or they must of necessity have fresh Earth; or some Defects about the Roots do require it.

For this make choice of the Months of *April*, the beginning of *May* or *October*, and according to *Ferrarius*'s Doctrine, in the Wain of the Moon, after that the holes in the Tubs or Pots are secured from being stopt, (which is prevented by laying over them some round raised pieces of a broken Pot, yet so that the Water may have sufficient way to run out) lay then beneath upon the Bottom old rotten Cow-dung, three Fingers thick, and then as much fat good prepared Earth sifted fine, as is necessary (to set the Tree upon) press the same a little down with the flat of your Hand, to prevent the sinking down, for it is uncomly when the

Hesp. l. 2. cap. 12.

Earth

Earth is too much below the edge of the Tub or Pot.

After the Tree is looſned round about in the old Tub or Pot, and taken out, then cut the ſuperfluous Fibres off with a ſharp Knife, and ſee whether there be yet any other Defect or Fault to be found about it, which then may be removed. You muſt keep the Roots from Bruiſes, for thereby they are hurt, and are very prejudicial to the Tree, becauſe they eaſily cauſe rotting; whence many times a pining and lingring Sickneſs ariſes.

After this done, put the Tree then again right in the middle of the new prepared Place, fill the ſame up with the foreſaid Earth, and preſs it down a little, that the Tree may get firmneſs; which alſo muſt not be ſet too deep.

After that the Earth is brought

to

to a convenient height, three Fingers breadth above the Root, then put and ſet the new planted Tree ſome Days in a ſhady warm Place, and ſecure the ſame againſt all Moving, Shaking, Winds, Thruſting, or any otherwiſe.

Neither muſt ye water this Earth the ſame Day, but two or three Days after, and that but moderately, becauſe otherwiſe it becomes ſluddy and Miry, and cling'd too cloſe together, which doth no good.

And thus muſt we endeavour to reduce the Trees to freſh Strength and Vigour, which we may diſcern by the coming forth of new Shoots.

Time of Tranſ-planting

The right time to Tranſplant, is in the end of *April*, or in the beginning of *October*, for at both times may this Work be done, though in my Judgment, the Spring,

Spring, or forepart of the Year is moſt fit.

When this Tranſplanting is done in *Autumn*, ye muſt let the Tree ſtand ſtill till the Spring, and water the Earth but moderately, till the time it is brought into the Houſe, and then water no more, except Neceſſity requires it.

Changing of Tubs or Pots.

When a Pot or Tub becomes too little, or is broken, ye muſt take the Tree out, with the Earth that cleaves to it in one Lump: is the Tub periſhed or decayed, cut off the Hoopes or Staves round about, and after the impoveriſhed Earth is taken away an Hands breadth next to the knitted Net of Fibres at the Root, which are commonly at the Bottom, then order your Buſineſs further as is ſaid above.

CHAP.

CHAP. XXXV.

Of Removing of Trees.

TO Remove tender Trees (which are in theſe Climates, and maintained in narrow Tubs and Pots) from one City to another, or places farther remote; it muſt be done in the Months of *March* or *April*.

If it be done by Water, that is the fitteſt time.

Firſt, Becauſe the heat of the Sun as then doth not cauſe any Soultryneſs in the Veſſels, whereby the Trees might be ſtifled, and loſe their Leaves and Fruits.

Secondly, This time muſt be obſerved, that the Trees may be at the place where ye would have them, before they come to ſhoot

ſhoot out, and ſecure them the better againſt all Dammage; but if the Voyage be long by Sea, the Removal muſt be ſooner in the forepart of the Year, that the Trees may be at the deſigned place before the warm Weather, and not partake of the foreſaid Harms.

In this Removing is yet another Danger, beſides the breaking and ſpoiling of the Boughs, and ſtifling of them, *viz.* that of Rats, againſt which we muſt take Care, that the Stocks and Heads may be kept whole and unſpoiled; for it may happen that this hurtful Vermine, being pinched with great Thirſt, eat the Barks of theſe Trees, and ſo ſpoil, mangle, and Kill them, as hath happened to us. Againſt Rats.

The beſt means againſt this, is, to cauſe ſome Pots with freſh Water

Water to be ſet in the Ships about the Room where the Trees ſtand, that this Vermine may quench their Thirſt, and theſe tender Travellers be brought over in the moſt comely manner to their Maſter. If this removal muſt be done by Land, ye are to take Care only that they may be ſafe in the Waggons from breaking and hitting againſt ſomething, or againſt one another.

Of the time to bring them into, and out of the winter Place or green Houſe.

To this belongs the removing, as into, ſo alſo out of the winter Place or green Houſe; when the Summer begins to draw to an End, and it is come to about the eight of *October*, or the twenty eighth of *September*, the Trees ſhall be brought under a Shelter or Cover, in a fair, a clear Day, when the Leaves are well dry, (whether it be a Gallery, made of Reed or Straw, or otherwiſe,

as

as a Man hath the Conveniency) letting them ſtand there ſome Days, till ye ſee that it begins to be time to put them into the winter Place or green Houſe, which is ordinarily about the middle of *October*, or ſomewhat later, according as the Days are fair, and the Weather good.

In the ſetting of the Trees, you muſt obſerve, that they ſtand Airy, and as little as is poſſible into one another, leſt, by the hanging of the Heads in one another, the Leaves and Boughs ſtiffe, neither muſt they be placed too near the Stove, or fire-Place, to receive any Hurt by the Heat; and ye muſt make the placing ſo, that ye may eaſily come to the Trees, to help them upon all Inconveniency.

In the Spring, about the tenth of *May*, when it is mild and rainy Weather,

Weather, remove the Trees again out of the winter Place or green Houſe, into the open Air, but not at firſt into the hot Sunſhine, becauſe they cannot ſo ſuddenly endure the ſame, but loſe thereby their Leaves and Fruits; therefore you muſt ſtay for a Day that it rains, or otherwiſe you ſhall bring the Trees for ſome Days into a ſhady Place, to uſe them again by degrees to the Air and Sunſhine; how you are further to Order them in the winter Place, or green Houſe, ſhall be ſaid afterward.

CHAP.

CHAP. XXXVI.

Of Dunging, Refreſhing, and digging about the Trees.

THE dunging of Limon and Orange Trees is done according to the Diverſity of Climates; and becauſe we intend to direct this Ordering according to the Condition of our *Belgium, Netherland*: this Work muſt be done in the Month of *May*, as ſoon as the Trees come out of the Winter-Place, or Green-Houſe, and that every two or three years, according as Neceſſity requires. *Ferrar. Heſp. l. 2. cap.* 13.

Digg the old Earth one Hands breath or more round, with a ſharp Trowel, or ſmall Spade, out of the Tub or Pot, wherein the Tree ſtands, as deep as you

can come, withal taking away the old fibrous Roots, ſpent and worn out Earth; this being done, fill the Tubs up again with fat-dunged light fine ſifted Earth, which hath been prepared ſome time before for it, and often wrought together with old Cow and Horſe-dung, till the ſame be well mixed and rotten; and after the ſaid filling up, make the uppermoſt Earth even, letting the ſame ly lightly, to further the Influence or ſoaking in of the Water, which by Rain or Watering comes upon it.

By means of this Dunging and Refreſhing, can this noble Plant be Nouriſhed in narrow cloſe Veſſels, with great eaſe, and maintained in Fruitfulneſs.

We have only propounded the moſt ſimple and plain Way, as being the ſureſt, leaving the Artificial,

ficial, which ſome have Invented, and Endeavoured to Recommend to the World for Wonders, but deceiveth none more than thoſe that uſe it moſt, as we have touched upon before in part, in the Deſcription of the Dung.

Digging about.

The digging about is done yearly in the Spring, againſt the time that the Trees come out of the Winter-Place or Green-Houſe, and is nothing elſe, but a taking away of the uppermoſt Earth of the Tubs two or three Fingers breadth deep, and filling them up again with other Good, inſtead of the ſpent and worn out Dung, thereby, by this maintaining, as much as is poſſible, to ſtrengthen and bring Nouriſhment to the Earth in the Tubs and Pots.

CHAP. XXXVII.

Of Watering.

De Meg. Halelu-jah. c. 4.

BEing the Nouriſhment of Trees, and whatſoever Grows out of the Earth, conſiſts out of the fineſt Particles of the Earth and Water, which ſpreads and diſperſes itſelf through ſmall Pores along by little Strings, like Veins, through all their Parts, and by the natural Warmth, being ſtrengthned with the Heat of the Sun, which pierceth from without, doth turn into the Shape and Form of thoſe Parts to which it is brought; and being Water is Neceſſary, whithout which no Tree can Live; for it ſerves to the looſening and thinning of the ſaid Parts, that the ſame may

the

the more conveniently be drawn up through the opened Pores, and carried to the Place where they are turned into Nouriſhment.

And ſeeing our *Heſperial* Strangers want the free Uſe of the Earth with us, and muſt be contented with ſmall and narrow cloſe Tubs and Pots; it is neceſſary we lend them the helping Hand, by bringing Water to them, which by the Rain, except it be of long continuance, cannot be ſufficiently given, or is hindred through the width and breadth of their Heads, which cauſe the Rain-Water to run moſt down by their Sides; wherefore the help of watering is highly requiſite here.

Among all the Parts of this Ordering, this is none of the leaſt, and we muſt obſerve; firſt, the Choice of Water, and ſecondly,

the time when we ſhall Water.

What water is to be made choice of. *Heſp. l.2.c.14.*

Ferrarius, (whom we here alſo follow) puts ſweet and conſtantly running Spring and River-Water for the beſt, as being moſt Piercing, and wholeſomeſt, and next to the Rain-Water, which is gathered and kept in Ciſterns, or Tubs: and thirdly, Well or Pump-Water, which is commonly Cold, hath many Defaults and Properties which it carries with it out of the different Grounds, whence it Springs.

Much leſs in Virtue is the Water which comes out of Mooriſh Places; but worſt of all is that of ſtanding Lakes, and Ponds; alſo that which is thick, ſaltiſh, brackiſh, ſulphureous, and of groſs Parts, which muſt be rejected for this Uſe, and that only be choſen which is here above Approved, *viz.* that VVater which hath

hath a good Smell, ſweet Taſt, without any Slymineſs, which in the VVinter is ſomewhat Lukewarm, and in the Summer moderately Cool; for this is judged wholeſom and pleaſant, as well for Men as for Trees; but River, and Rain-VVater excelleth all other; when enough may be had, we ſhall keep to it. There be Perſons that prepare ſeveral Mixtures, with Dung, Saltpeter, and VVater, to water therewith; but being we rejected that in the thirtieth Chapter, and have ſpoken of it before, we ſhall ſay no more to it now.

VVe muſt order our ſelves according to the Difference of the Seaſons to water Orange Trees. Time.

In hot and dry VVeather, it muſt be done every ſecond or third Day in the Evening, when the Sun is going down, and

Shines no more upon the Trees; for if they be watered in the heat of the Day, it will cauſe a great Sickneſs; wherefore we ſtay till the Evening, by reaſon that the heat of the Sun having layn upon the Roots all the Day, they may thereby in ſome meaſure be Refreſhed.

This watering muſt be done with Care, ſo that the Earth be kept moderately moiſt, and not too wet, and reduced to a dirty Myrineſs; we muſt alſo beware of the Stocks, leſt they chill by the Water which comes againſt them, grow foul, moſſy, and come to a pining Sickneſs.

We muſt eſpecially obſerve that the Water we ſhall uſe in watering, muſt be warmed in the Sun before it be uſed, becauſe cold-Water is very hurtful to the Trees; therefore we uſe Casks

and

and Tubs, or wooden Troughs, which ſtand all the Day long in the Sun, and wherein the Water is put the Day before it is uſed.

The time when this watering begins and ends here in theſe Countries, is commonly *May*, to the latter end of *Auguſt*, or ſomewhat longer, according as the Days be Wet, Hot, or Cold.

We muſt obſerve this general Rule in this Affair, which is above, in ſome meaſure touched upon, *viz.* that we do not water theſe Trees too much; for if they be kept too wet, it cools and chills the Root, and the Leaves grow Yellow; too much drineſs is alſo hurtful, ſo that Moderation muſt be obſerved here; which we may ſufficiently know by the Earth itſelf; for theſe Trees muſt not be over-watered.

As long as the Trees ſtand in the In winter time.

the Winter-Place or Green-Houſe, they are ſeldom watered, except Neceſſity requires it; which may be diſcerned by the ſhrinking in of the Leaves, and the limberneſs of their Fruits, and then the watering muſt be but little, till the Faintneſs ceaſes, and the Fruits and Leaves return to their former State.

When this watering is to be done, we ſhall warm a Pot with Water over the Fire, and ſo temper it with cold VVater, that it is fitly lukewarm, as if it had ſtood a Summers Day in the Sun, for great Cold is very prejudicial to the Roots.

In the Spring, from *April* to *May*, we ſhall ſeek to cheriſh theſe Trees by a ſlowiſh Feeding, or Refreſhing with VVater, which is ſet upon the Tubs, in flat Pots or Pans, wherein ly longiſh Pieces of

of woollen Selveges, which by little and little ſuck it in, and ſo thence diſtills again into the Earth, which thus in time begins to moiſten, and give Nouriſhment to the Tree; but if we do water much in the Spring, the Fruit will Mourn, and fall off, which according to *Ferrarius* his Opinion, comes to paſs, becauſe the Trees have ſufficient Moiſtneſs and Sap in them, and aſcends from the Root, whereby the Fruits are, as it were, looſned, and fall off. *Heſp. l. 4. cap. 21.*

Hitherto now, what concerneth watering; if it be well obſerved in the Blowing time, and ſwelling of the Fruit, we ſhall find, that the Trees are Cheerly and Merry, and ſhall richly Reward the Maſter's Labour and Pains with Bloſſoms, Fruits, and pleaſant Leaves.

CHAP.

CHAP. XXXVIII.

Of Cutting or Pruning.

A Two-fold Cutting or Pruning is uſed about theſe Trees.

Firſt, That which is uſed yearly, by taking away the dead VVood, and ſuperfluous Branches.

Secondly, The taking or cutting of the whole Head. *Firſt*,

Limon Trees. The Pruning, which the Limon Tree requires, is about the ſuperfluous VVood, which the Tree often makes, and muſt needs be cut off, as well in regard of the good Shape of her Head, as of the common welfare of her Fruits; for through want of this work the Limon Trees get irregular ſlender Heads, which render

der them Ungraceful to the Eye.

Secondly, VVe muſt alſo clear them of the dead VVood, which diſcovers itſelf in the fore-part of the Year, while they yet ſtand in the Houſe; and is cauſed through Moiſtneſs, which falling down upon the Boughs and Leaves, produces Stifling and Moldineſs, which by a ſharp Property, bites and eats out the Life of the tender VVood and Leaves; and cauſes a pernicious Deadneſs, and Infects the whole Bough in a ſhort time, if we be not careful about it, to ſtop the Malady by cutting off; therefore muſt this be taken away to the Quick, and the VVounds covered up with grafting-VVax, to prevent further Corruption.

The Orange Tree is likewiſe ſubject to the forementioned Evil; wherefore he muſt be handled as the Limon Tree in this caſe; But yet

Orange Tree.

yet he hath this peculiar, that he often produces at the fore-ends of the Boughs very Close, Churlish, and many small Shoots (and they especially with curled and wrinkled Leaves) which do the more strongly draw and suck away the Nourishment, and hinder the farther shooting of young Branches, and make the Trees to Blossom too much, whereby at last a Consumption is caused.

To prevent which, these superfluous Twiggs or little Shoots are in their beginning broken or taken off, and but two, or at most three left together; or if you find that too many of these Shoots or Twiggs are left, they are taken away at the ordinary time of Pruning, to the end the next new coming, may come forth the more strongly, and lustily.

The taking off of the Head.

When we observe that the Limon

mon and Orange Trees begin to leave Growing, and fail to ſhoot new Branches, which are Signs that the growing Virtue is decayed, being cauſed by the abundant Bloſſoming and Fruit-bearing; then ſhall ye cut the whole Head off within an Hands breadth, and Tranſplant the Tree into freſh Earth (as is taught before, *Cap.* 8.) after the Roots are well cleared: Whereby the ſame obtains, as it were, a new Life, and we get again likewiſe, inſtead of Trees decayed, young and flouriſhing ones.

The Time.

This pruning Work muſt be taken in hand in the Spring, *viz.* aſſoon as the Trees come out of the VVinter Place, or Green Houſe, and according to *Ferrarius* his Leſſon, in the VVain of the Moon; but for the cutting away of Sear or dead VVood, no time is to be

Heſp. l. 6. c. 16.

be obſerved for the taking off of the whole Head; we can preſcribe no Years, becauſe the forementioned Signs about them muſt be only obſerved.

The Inſtruments, we have need of for this VVork, are a pruning Chiſſel, a wooden Mallet, ſmall Saw, a crooked pruning Knife, grafting VVax to ſecure the made VVound from dripping Moiſture, and to further the Cure.

CHAP. XXXIX.

Of the Means againſt many Defaults and Vermine.

EVen as Men and Animals are ſubject to Sickneſs, Ails, and Enemies; ſo alſo the Trees and Plants, which muſt needs by Means

Means be rid of them, and defended againſt them, if we will keep them in Proſperity and Health.

The common Diſtempers, which we find here in theſe Countries, are Gumms, growing Yellow, Lice, Rottonneſs, and Decay.

Concerning the firſt; The ſame hath, or takes its Original from ſome ill natured cold tough Matter, which Nature ſeeks to throw off, or caſt out at one place or other, in a tough and ſharp Moiſtneſs, which Cankers and Corrupts whereſoever it runs or flows; therefore as ſoon as this Evil is perceived, the gummy Place ſhall be cut out with a ſharp Knife to the quick Wood, and the outcut Wound rubbed with Lime and Aſhes of Turf, mixed together with Rain-Water, to a conveni- Gumms.

ent Thickneſs, and then be covered over with Grafting Wax.

This hath been often uſed with good Advantage on this Occaſion, and is the ſame Means which *Ferrarius* Deſcribes or Preſcribes againſt the rotting of them. *Heſp. l. 4. c. 22.*

Yellowneſs of Leaves.

Againſt the growing Yellow of the Leaves; which takes its Original from the ill Diſpoſition of the inward Parts, or from the Rottenneſs of the Roots, and ſometimes alſo from too much watering, whereby the Tree is Chilled, or from the long continued Exſiccation of the Earth; So is it that the ſame Author Recommends to bury a dead Dogg at the Roots of the Trees; and being ſuch cannot well be done with us, becauſe we muſt miſs the Uſe of the free Earth, and behelp our ſelves with narrow Pots and Tubs; we have ſeen that

that inſtead thereof is uſed the Shavings or Scrapings of Neats Horns, rotten before, and ſcalded, whereby theſe Trees ſeemed to live again anew. But here Care muſt be taken, that the Scrapings, or Shavings of Horns, be uſed moderately, that the Trees may not be Damnified through the Sharpneſs they have in them.

But if it proceed from the Rottenneſs or Corruption of the Roots, it is moſt fit to take the Tree up, to put away the old Earth, and to clear the Root of all corrupt Fibres and Branches, and ſo Plant him again in new Earth, whereby the ſame ſhall ſhoot to a more flouriſhing Growth.

If it be cauſed by too much Wett, which Chills the Root, then the beſt means is that we look to the Tubs and Pots; for it

happens ſometimes that the Holes underneath are ſtopt, whereby the Water cannot run out, but keeps ſtanding about the Root, and cauſes this Evil to it; therefore they muſt be opened, that there may be a due Courſe for the Water. Or if it happens through the Earths being too cloſe cling'd together, or for want of Air, then the Tranſplanting is the next Means.

Lice. What hath here the name of Lice, we find to be much rather a Diſtemper, which hath its Original from the Trees being Foul, which is often cauſed by Mildew, too many moiſt Vapours in the winter Place, or green Houſe, through the little airing, and too cloſe ſtanding together of the Trees (as well as an Enemy which comes upon them from without) and is rightly called the louſy Diſeaſe;

ſeaſe; for it is not enough that one Tree is tainted therewith, but all that ſtand about it become Partakers of the ſame Evil.

This Vermin, or Creature, if we may ſo call it, is in its beginning of a white Colour, of Shape longiſh Round; when it is perfect, it is of the bigneſs of an ordinary wall-Louſe, of a Cheſſnut Colour, upon the Back beſet with long Hairs, but they periſh in few Days; within it is full of grayiſh Moiſture, which is of a ſweet Taſt, wherefore the Ants are much about it, and like of the Sweetneſs.

This Wet or Moiſtneſs ſeems to ſerve this Creature for Nouriſhment, which it draws out of the Bark of the Tree: But it ſits moſt upon the Leaves, and moſt flouriſhing Branches, and we cannot eaſily obſerve that it moves from

its Place, though it doth ſo very ſlowly.

When now againſt the declining of the Summer, this little Animal begins to dye, and its Sap and Moiſture dryeth up, it voids a multitude of white Matter, which are Eggs, Nits, or Seed, whereby it is Propagated again.

We have Experienced, that where this white Matter takes place, yea even in Vines, Peach, Laurel, and Myrtletree, that they were the next Year tainted with this Evil, and that inſtead of one, hundreds came to light; ſo that they by ſucking the natural Nouriſhment from the Trees, killed them, as hath happened to ſeveral Trees.

This Vermine doth not dye through Cold, but endures even the coldeſt Winter; and what Means ſoever have been uſed to drive

drive away this Diſtemper, the only Means is found to be, the making of the Trees clean from their Filth and Foulneſs, with a Spunge wetted in Rain-Water, wherewith we cauſed the Leaves and Boughs in the Spring to be waſhed and wiped, before the ſame began to ſhoot out, and hereby was this Evil quite overcome, which otherwiſe was ſufficient wholy to deſtroy the Infected Trees.

We being now freed of this, have thought fit not to hide this eaſy and ordinary Means from others, but have been therefore ſomewhat longer in relating ſo dangerous an Ayl, and its Cure.

Againſt Rottenneſs in the Stocks or Boughs of the Trees, nothing elſe is to be uſed but what is ſaid above of the Gumms. Rottenneſs.

When the Trees begin to wax Old, The growing or waxing Old.

Old, and they produce no young Branches, but dye by little and little from the Top; then the only Means is to take off the whole Head in the Spring, within an Hands breadth above the Inoculation, that they may ſprout out again, and come again by a new Growth to their firſt Luſtineſs, and Vigour, and freſh Strength, as is ſhewed before.

Now we are to conſider the outward Enemies, which come to aſſault and diſquiet theſe *Heſperial* Inhabitants, *viz.* the Aunts, Earwiggs, and Spiders.

The two firſt endammage theſe Trees, eſpecially in their young Shoots and Bloſſoms.

Heſp. l. 2. cap. 18. Againſt which many Means are Invented; *Ferrarius* will, that we ſtrow Aſhes about the Stock, or lay about it Cotton dipt in *Oyl of Stone*, which by its ſtench doth drive

drive away this Vermine. But in our time we have ſeen better Weapons to keep off theſe ill natured Gueſts, *viz.* Leaden or Latin Rings of an Hands Breadth, which were made or ſet together round about the Stock, and of an Inch or two deep, which are kept full of Water, wherewith the Tree being compaſſed about, as it were with a Ditch, this Vermin is hindred from climbing up, and defended alſo againſt theſe Enemies.

This Invention was firſt brought to light by the Sieur *John Foeters*, in his Life time Secretary of *Amſterdam*, and a great Lover of this Husbandry.

Further, others have ſet their Trees upon little Benches, or Frames of half a Foot above Ground, whoſe Feet being made of little thick ſhort pieces of Wood, ſtand

ſtand in little Troughs, which are kept full of Water, and keep theſe Pernicious Creatures from the Trees.

The Earwiggs, which devour and ſpoil theſe young tender Shoots, may be catcht with pieces of coarſe Linnen laid in the Trees, and ſo kept in and Curbed.

Spiders. Spiders hurt the Limon and Orange Trees by Spinning the Leaves together, and by pulling the young Shoots together, whereby the Leaves become Black, Foul, and are hindred much in their Growth.

The only Remedy againſt this Evil is to catch the ſame, and ſo chaſing away theſe Tyrants, to make theſe Plants free from ſuch a filthy Crew.

Againſt bad Winds. Concerning other Miſchances of Winds, bad Airs, thereof is taught before how they may be hindered

hindered and kept off.

When the Trees in the Winter are Houſed, they are often troubled with Mice and Rats, becauſe they cannot come by Water; wherefore it is not amiſs to provide the winter Place, or green Houſe with Traps and Pans of Water, that this Vermine may either be catcht, or their Thirſt quencht, to compel them to excuſe and leave the Trees, as we have ſeen that very much happened to Sieur *William Vanden-Heuvell*. Againſt Mice & Rats.

What concerneth Snails and Caterpillers, it is not found in this Country, that they bring any Harm to theſe Plants, and therefore Unneceſſary upon this Occaſion, to Admoniſh or Mention of them: If they be found on them, the beſt Means againſt them, is to catch them. Snails & Caterpillars.

CHAP.

CHAP. XL.

Of the winter Place, or green House, and its Use.

BEcause it is impossible to Order these Outlandish Plants well in these Countries, except we know how conveniently to defend them in the winter Season against the Frost and Cold, which cannot be done, if there be not a good winter Place provided.

We see that in *Brabant* and *Flanders* they use arched Cellars, to avoid the inconveniency of making Fire. But thereby they also commonly lose their fruit, which through or by reason of the little air, and moist Vapours, which the Trees receive, decay and fall off, except they be again carried out

out of the Cellar into a lightſom room, as ſoon as the froſt is over; which is not well to be done for any one that hath a great number of Trees, by reaſon the labour would be too great and chargeable, becauſe of the multitude; beſides with the frequent removing we run the hazard to ſpoil the heads by hitting them againſt ſome thing or other.

To this Work is at leaſt a lightſom Room required, which is free from all Cold piercing Winds, and hath Glaſs-Windows to the South, that the Sun Shining in the Winter, may refreſh theſe tender Strangers, with her pleaſant and grateful Beam.

What manner of Winter-place or Green-houſe ſoever we prepare, Care muſt be had that it ſtand with the open part as much as is poſſible to the South.

Here

Here I might give the deſcription and the dimention of ſeveral Green houſes ſet down by the Author, but think it needleſs, becauſe as the Author ſaith, every one may and doth make them as he thinketh good and Convenient.

Yet the Uſe is one and the ſame. *Viz.* for the preſervation of tender plants, which cannot endure and ſtand out againſt our Cold Winter ſtorms and Tempeſts.

Uſe of the winter place or Green Houſe.

From the time that the Trees are ſet into the Green houſe or Winter place we muſt begin to take Care to watch againſt all Incident inconveniencies and unchanches; for through careleſsneſs more harm may be done in one night, then we can again overcome and repair in an whole year; but on what time ſuch muſt be

be done, cannot be well preſcribed in regard of the Months, becauſe the Condition of the Weather muſt ſhew it.

For it happeneth many times here in this Country in ſome mild Winter that the Glaſs-Windows are whole days open, and therefore it ſerves for a general rule, that as long as it is fair Weather, and doth not freeze, the Wooden Shutters ſhall be left open day and night to the middle of *November*, and then ſhall they be ſhut before the Sun goes down; But when it is miſty, miſly, and froſty Weather, they ſhall be kept cloſe, and it muſt not be tedious to a practitioner to open and ſhut the Windows, though often in one day, for the more the Trees are aired, the better it is to prevent all ſtifling and moulding.

The opening ag Shutting of the wooden windows or Shutters.

Now when it begins to freeze, tho

tho not ſo hard as that it freezeth within the houſe, then open only the Wooden Shutters, to the end, that the Sun ſhining into the winter place or green houſe may refreſh the Trees and the Fruits; and againſt the evening before the Sun is ſet, the ſame muſt be ſhut again, that in the night they may not ſuddenly be ſurprized by the Cold.

Now when the Froſt begins to increaſe, the Green houſe ſhall be wholly kepr ſhut, and we muſt take Care there be no holes or chinks for the Wind to come in or through, for where the ſame doth light, it doth great harm, and cauſeth Froſt the ſooner within doors: Nevertheleſs when it is a fair Sun ſhine at noon day, the ſame may be let in through the Glaſs-Windows, and being gone, Shut them again Cloſe.

Now

Now when it Freezeth ſo hard, that there is no longer keeping within Doors, without making Fire, which we may obſerve by putting ſome Pans or Pots with Water here and there in the Green-Houſe, and when we ſee that Freeze, then is it time to make Fire in the Stoves; which is commonly done early in the Morning and at Night about nine of the Clock. But if it comes to paſs, that theſe two Fires are not enough in the Day, then alſo a Fire muſt be made at Noon-Day; and in making this Fire, keep alſo this common Rule. The time of making Fire.

As long as the Water doth not Freeze in the Pans, we need not to make a Fire, and when the Water doth Freeze, we muſt make no greater Fire, then that we ſee the Ice to grow looſe, and that the Froſt can lay no hold thereon; for if we make too hot a Fire, it ſhall do more Hurt, then if it came to Freeze once in the The common Rule to make Fire.

Green-House. It once happened to me, that the Frost took the Trees by Night, and the Leaves and Fruits were stiff, as if they had been white with the same; which was caused by the Carelesness of the Gardiner. To repair this Mischance, there was a slow Fire made in the Stove, and not an hot or great one at first; through which Sweet, pleasantly increasing VVarmth, the frozen Leaves and Fruits began by Degrees to Thaw, and to come to their former Condition; yea, I had never more ripe Fruits then in that same Year, 1668.

Moistness in the Green-House.

It comes also sometimes to pass, that in the Green-House, or VVinter-Place, there hang many Drops of VVater at the Ceiling (when many Days together a Fire is made, without opening the wooden VVindows, by reason of the continual Frost,) which falling down upon the Trees, do them great wrong, *viz.* cause moulding

moulding to the Boughs, and the Fruits and Leaves to fall off; against which must be provided, and daily be taken off with a Map, and as soon as the Season doth any way permit, to open the wooden Shutters, to make these moist Vapors, which arise out of the Earth, to go away; for by reason of the Doors and VVindows being long time close, they continue.

And on this manner must we order our Business in times of Frost; which now ceasing, the Windows must be opened again, to air the Trees; and further deal with them as is said above.

The time to open the Glass-Windows again.

But to tye the making of Fire to *December*, *January*, and *February*, as some Authors hold, is not good in our Judgment; for it happens that whole Winters pass, and no need to make a Fire, as we have mentioned above; But it is best of all, that we order our Affairs according to the

Weather, and do therein as we have here ſhewed.

I Remember a certain Accident, which in regard of mentioning the making of Fire, I cannot omit to Relate.

A certain Perſon of Quality, coming into the famous Garden of the Sieur *Roeters*, and after he had taken Notice of all things, asked that famous Practitioner and Orderer, how much Turf he burnt in a Winter, in regard his Trees looked ſo exceedingly fair? The Sieur *Roeters* not knowing the reaſon of the Queſtion, Anſwered, that he had preſerved and kept all his Trees for two Years, with about an hundred Baskets full, (which comes to about twenty four Gilders, which are about forty ſix, or forty ſeven Shillings *Sterl.*) and that there was ſome Quantity left.

How is that poſſible, replyed the other? My Servant hath ſpent above two hundred Baskets of Turf, and

yet

yet my Trees are dead.

At which they all Laughed, as perceiving that the overmuch Heat had ſtifled and dryed up his Trees: Whence we may ſee, that not the great Charges, but the right Knowledg, gives the beſt Fruits.

When now the Froſt is paſt, and the Spring draws on, the Trees muſt be uſed again to the Air, by the opening and ſhutting the wooden and glaſs-Windows, in convenient and due time, and therein order our Affairs according as the Weather gives Direction. The time for opening again the Green-Houſe.

For this is ſure, that Miſt, Vapor, Moiſtneſs, and Froſt, muſt not be ſuffered in the Green-Houſe.

In this Work, we muſt continue to the time that we ſet theſe Trees again in the beginning of *May* into the open Air, in mild and rainy Weather; above all, take Care in the bringing of them out, that the Sun doth not too ſuddenly ſhine up- The time to bring them out again.

on them, but used to it by degrees; and then order them further, with Watering, Pruning, and other such like Actions, as are shewed particularly in their proper Places, that they may keep their Leaves, & Fruits; and Reward their Masters Labours with Golden *Hesperial* Apples, which no Practitioner shall obtain, except he hath before duly Tamed and Overcome the strong winter-Dragon.

CHAP. XLI.

Of Gathering the Blossoms and Fruits.

Unloading of the Trees.

IT is necessary to the Preservation of the Trees, that we ease them of their Blossoms and Fruits in due time; for through the abundant Blossoming they are wasted and spent, lose their Strength, and totally Decay, because it is impossible to feed them all.

Therefore

Therefore it is requiſite to gather them, and to haſten their Eaſe, by taking away all their after, or ſide-Bloſſoms, leaving the firſt heart-Bloſſoms only for the Production of Fruit, and them, no more then we judg the Tree can conveniently Feed, which ſhall then become the Larger and Fairer; and by this Eaſe the young Shoots ſhall more ſtrongly come forth, and the Trees continue in a better flouriſhing Condition.

The gathered Bloſſoms may be uſed for ſeveral things, as ſhall be ſhewed more largely afterward.

The Fruits, as well Limons as Oranges, muſt be gathered and taken off at their Time. The time of gathering the Fruits.

VVe cannot here, as is done in *Italy*, preſcribe the right Time for every Sort, by reaſon of the Inconſtancy and Variety of our Summers; for it hath ſometimes happened that the Limons and Oranges have been

gathered with us in warm Summers, in the Month of *September*, having their due Maturity, whereas ordinarily they muſt be let hang till the Months of *February* or *March*.

Now to be ſure, the Fruits ſhall be gathered when they have their due Bigneſs and Colour, which may one Year with another differ ſometimes ſome Months, according as the Summer proves either Cool or Warm.

A twofold Gathering is made about theſe Fruits, *viz.* Unripe, and Ripe; the firſt being uſed to make Conſerves, and the other to preſs the Juice out of them for Food and phyſical Uſes. Therefore, whichſoever we gather, we muſt go very warily about it; for to pluck them off with the Hand, would not do well, as being with Danger to ſpoil and hurt the Trees, becauſe they ſtick too faſt to the Boughs, and can hardly be parted from them without danger

danger of Renting; wherefore we are Neceſſitated to cut them off with a ſharp Knife, in ſuch a manner, that to every Fruit is left a little Sprigg, which is for its Ornament; and in this cutting muſt be obſerved that we hurt the Tree as little as is poſſible: When now this cutting off is done in due time, the new coming on Fruit ſhall thrive the better, becauſe they have the Nouriſhment then alone, which otherwiſe they were to ſhare with them that are cut off.

There is nothing better for the Trees, then to Unload and Eaſe them, if their Welfare ſhall be furthered. Some let the Fruits hang long, to make a Show with them; but doubtleſs it is prejudicial to them, becauſe we ſee, that when Limons are over ripe, they fall off, and the Oranges dry up, even as if the Nouriſhment were denyed them of the Mother, the Tree, to the old Fruits,

to

to give it to these young comers on; whence we may clearly observe, that Nature sheweth us how needful it is for the Tree and Fruits, that we Ease and Unload them in due time, that they may both be preserved and secured against Decay and Death.

CHAP. XLII.

Of the Profit and Use of the Orange Tree.

WHat is Honest, Profitable, and Pleasant, is Praise-worthy, and may by all Men, without Scruple be taken in Hand; that these three Properties are to be found in our Imployment, is known to every one, that doth groundly understand the same.

What belongeth to delightful Pleasantness and Honesty, that they do sufficiently testify of themselves, and is needless to shew; and there-

fore

fore we ſhall only ſpeak of the Profit and Uſefulneſs of them.

The Benefits theſe Trees yield, are divers; for beſides that, after they are come to their due Bigneſs, they may be ſold for much Money, and great Gain be made by them: They are alſo of ſpecial Uſe in Phyſick, Houſe-keeping, and Perfuming; whereof we ſhall Treat.

Many things are prepared of the Orange Tree, as well for Delight as for neceſſary Uſe.

The Leaves are good for a broken or bruiſed Shin, and heals it, when they are laid on freſh twice a Day; theſe Leaves chewed in the Mouth, cauſe a ſweet Breath. The Leaves.

There is a Water Diſtilled of Orange Bloſſoms, which is of a pleaſant Smell, and is uſeful for many things in Phyſick; chiefly to cauſe Sweating, to ſtrengthen the Heart, and many Diſtempers more, whereof the Writings of Phyſitians and Herbaliſts are full. *R. Dodon. Herb. l. 18. c. 2.*

To

To make this Water, the Orange Bloſſoms ſhall be gathered in the Morning before the Sun hath Shone on them, and Diſtilled in a Pewter Still, with a ſlow Fire, that they may not in the leaſt be Burnt, for this Diſtilling muſt only be done by Steaming out; whereby we ſhall get, though but a little, yet nevertheleſs a very Pleaſant and ſtrong Water. Ye may likewiſe, if ye deſire a greater Quantity, Diſtil them in a Limbeck, but then the Water ſhall not ſmell ſo Sweet.

The Bloſſoms of Orange Trees are very good to be laid in a Cheſt of clean Linnen, to give it a pleaſant Smell.

But to draw Oyl out of the Bloſſoms by Diſtillation, is not well poſſible here in theſe Countries, becauſe the abundance which is hereunto required, is too great; for ſix hundred Pounds do ſcarce yield two or three Ounces: Yet that we may not be wholy

wholy deprived of this pleaſant Smell, here is afterward Taught how we ſhall Prepare this another way.

To make an Extraction with Brandy from the Orange Bloſſoms; take to every Pint two Ounces of Bloſſoms, ſet them in the Sun to Diſtil, fourteen Days long; and uſe thereof a ſpoonful together, againſt many ſeveral cold Diſtempers and Aills, and eſpecially againſt the Cholick or ſhrinking of the Guts. Brandy:

To Preſerve theſe Bloſſoms in Sugar, which is commonly called Confiting; they ſhall be gathered juſt before they open, and boiled in clean Rain-Water, till they be ſoft, and have in part loſt their Bitterneſs; after boyl the Sugar to a convenient thickneſs of a Syrop, and pour the ſame (after it is well Puriſyed with Whites of Eggs, and thoroughly Clear) warm upon the Bloſſoms, and let them ſtand cooling together; if the Syrop be too thin, or becomes

ſo

so afterwards, ye must boil the same again to its convenient Thickness, that the Blossoms may be kept and preserved the better: This is a most excellent Remedy against bad Airs, foul and stinking Vapours, and also an excellent Dainty.

Pastilli. Furthermore of Orange Blossoms, there are made *Pastilli*, or little Balls, after this following Fashion: Take fifty Blossoms which are quite open, pluck them off by the Stalk, that ye may not touch the Leaves, as little as is possible, that the Scent may not be spoiled; cut the Leaves with Scissers, very small one by one. To this take a pound of the best Loaf-Sugar-Candy that may be got, beat the same fine, and put them in a little brass Bason, and add three Ounces distilled Water of Orange Blossoms thereunto, stir it with a *Spatula*, till it be mingled together, which then set upon Coals, thoroughly kindled, and let it boil leisurly, till, when taken

taken up between your Fingers, it begins to ſtick to them as it were with fine ſmall Threds; then take it from the Fire, and put the clean cut Orange Bloſſoms into the boyled Sugar, ſtirring the ſame together with a *Spatula*, till it be well mixed; then take a Board of hard Wood, which is full of little hollow Places, and ſtrew it thick with fine beaten Sugar, then fill all the holes full with a ſilver Spoon, of this mingled Syrop, which when cold, and then taken out, the Sugar which hangs about them muſt be taken off with a Knife from theſe little Balls, and then you have *Paſtilli*, which are very Good, Pleaſant, and Uſeful, for many things, eſpecially to ſtrengthen the Heart, and againſt all Faintings. They are alſo a good Means againſt all bad, unhealthful, and peſtilential Airs; the ſame melted in Roſe-Water, or Sorrel-Water, are very uſefully Taken and Uſed with Benefit in

all

all malignant Agues, and other Sicknesses, which have their Original from Cold.

Oyl. There is yet an Oyl made of these Blossoms, on this manner. Take Nuts of *Egypt*, Pistaches, or for want of them, sweet Almonds, the newer the better, press the Oyl out of them, (but without Fire, that it may keep Sweet the longer) then take white and purified Cotton, which is free from all spots, foul or musty Sent, otherwise it must be made Clean on this manner following, viz. It must be soaked in a Pot of strong Brine, till all bad Scents be drawn out of it, and being washed again in fresh Water, wet it again in the forementioned Oyl, yet so that the Oyl doth not drop out of it of it self; take then a new Earthen Pot, and cover the Bottom with new gathered Orange Blossoms, lay thereon a Laying of this oyled Cotton, and then Blossoms again, and so

ſo on a Laying of the one, and a Laying of the other, till the Pot be filled; which then cover cloſe with a Bladder, and put it in a dry Place, not Cold, nor yet too Warm: theſe Bloſſoms ſhall be changed every Day, taking away the Old, and putting in freſh ones inſtead thereof, and that five or ſix Days one after another, and then Squeeſe or Preſs the oiled Cotton: which Oyl gives a moſt ſweet and pleaſant Smell, fit to be uſed in many Perfumes.

As ſoon as this hath ſtood ſome time, the Dirt and Wateriſhneſs being ſetled, and the Oyl Clarified from it, and become clear, you may uſe it as your Occaſion ſerves.

This kind of Oyl of Orange Bloſſoms is taken out of *Ferrarius*, who had Learned it of one *Franciſcus Dagus*, and hath been made ſeveral times by others according to this Preſcript, and is found very Good. *Heſp. l. 4. cap. 24.*

The ſame Author Relates yet a-

nother much ſhorter Way, after this manner.

Take a Pound of Oyl of Nuts of *Egypt*, Piſtaches, or of ſweet Almonds, new preſſed, a Pound of Orange Bloſſoms, pick off the Leaves of them (which only muſt be uſed) beat them in a ſtone Mortar, put them in a glaſs-Bottle, and pour the Oyl on them, and having ſtood three or four Days, ſtrain the Oyl from the Bloſſoms through an hairy Strainer, and part it from the watry Moiſture which is mixt therewith; throw the old Bloſſoms away, and put in freſh ones, and that to the third time; then ſeparate and draw off your Oyl, and make it clear, to Perfume Gloves and other things: The ſame may be done with the Bloſſoms of Geſſamines.

Salve of the Oyl of Orange Bloſſoms.

There is alſo a Salve made of Orange Bloſſoms: Take white Wax, *Sperma-Ceti*, of each an Ounce; melt them over a ſoft Fire, and being taken off, put to it of our above mentioned

tioned Oyl of Orange Blossoms, as much as is convenient, which shall be stirred together with a Spatula, or little Ladle, till it be well mixt together and cold: It shall be cooled as soon as is possible, that through too much Heat the Oyl may not lose its Scent. You may also take instead of *Sperma Cæti*, or *Parma Cetie*, white clear Barrow's-Fat; this Salve is good against Heats in the Brest, when you Anoint the same therewith; and also against the hot Inflammations of the Gout, and such like Distempers, which arise from Heats.

Orange Apples are likewise for many Uses, and have many Virtues; the Pills are dryed, preserved Wet or Dry; and Oyl is also Distilled from them. The small green Apples, of the bigness of a Pease, are put upon Strings, and worn by Gentlewomen for Necklaces, and about their Wrists, because of their good and sweet Scent. Orange Apples.

The Pills of Oranges are of great

Use in the Art of Physick, and are of a warm Property: dried and powdered, they are very Useful against the Collick, and other cold Distempers, taken in a little warm Wine, cause Urine, and Sweat; you may use this Pouder from a Scruple to a Dram.

Schrod. in Pharmacop. Med. Chimic. l. 4. c. 45.

Conf. of Orange-Pills.

To Confite Orange-Pills, or to Preserve them with Sugar: You shall take Pills of fresh ripe Oranges; take out the inside White, and let them slly a-Soak some Days in fair Rain-Water, that the Bitterness may be most out of them; then boyl them in other Rain-Water, till they be soft; the Syrop must be conveniently boyled, and after the Pills are well drained, put them into it, and keep them for Use. Will you Confite them dry; take the Pills, after they have layn some time in the Syrop, out of it again, and put them into a warm place or Stove to dry.

And to Candy them, you must only

ly boyl the Syrop higher, then if you would preſerve them wet.

Theſe preſerved Orange-Pills ſtrengthen the Heart againſt all Faintings, warm the cold Stomach, and reſiſt all bad and peſtilential Airs.

To make an Oyl; take of freſh Orange-Pills fifty Pounds, and put them all in a Veſſel, ſtamp them cloſe together, and let them rot well; put them in a Limbeck, and pour a good quantity of Water upon them, and being Diſtilled with a moderate Fire, there comes over with the Water a clear and ſtrong-ſcented Oyl, which you muſt part from the Water, and keep for Uſe againſt all cold Ails, as well of the Stomach, as of other parts of the Body.

The ſame is alſo outwardly Applied againſt Cold, and ſtifned Sinews, by Anointing them therewith.

The Juice of Oranges hath divers Virtues, according as they are either Juice.

Sowre or Sweet: the laſt are Warmeſt, and are fitly Uſed in the hot Diſtempers of the Lungs, as cooling moderately. They that are of a moderate Taſt are very Pleaſant; but the Juice of the Sowre is more cooling; and there is a Syrop made of them to mix among all other Medicines againſt all malignant Feavers.

The Juice uſed with Meat, gives it a pleaſant Reliſh; the ſame is put into Meat by the Turks inſtead of Verjuice.

It is alſo very good againſt the Scurvy, cauſeth a ſweet Breath, as our Seamen can ſufficiently Teſtify; wherewith we ſhall conclude this; and touch a little upon the Uſe of the Limon Tree.

CHAP.

CHAP. XLIII.

Of the Uſe of the Limon Tree.

IT may perhaps ſeem Strange to ſome, that we place the Uſe of the Orange Tree before the Limon Tree, though the laſt be Deſcribed firſt; it is becauſe the Orange Tree is more Beloved with us, and commoner, and therefore we give the ſame the Precedency.

We come now to the Limon Tree, whoſe Fruits are not only known in the Art of Phyſick, but alſo in the Houſekeeping, and doth wholly agree in Virtues with the Citron Apple, as its Taſt ſheweth; being alſo divers in Operation, for the Sweet excel the Sowre in Warmth.

The Pills of the Limons are Preſerved or Confited with Sugar after the ſame Manner, as is heretofore Pills.

ſaid of the Orange Apples, to uſe them for Phyſick and Dainties.

Theat. Fungorum. p. 2. c. 3. The outſide of the Limon Pills is a very good Remedy for thoſe that have eaten bad Muſhrooms or *Fungi*, as *Franciſcus van Sterbeeck* writes. Being Diſtilled with Brandy, it is called in the Shops Limon-Water: As they alſo do with Orange Pills; is much drunk in the cold Northen Countries, yet moſt out of Wantonneſs, though it be not Unuſeful againſt cold inward Ails.

And for this Drink are yearly many thouſand of Pounds of Orange and Limon Pills uſed, which are ſent hither into theſe Countries out of *Italy*. Out of theſe Pills is an Oyl made, even as that out of the Orange Pills.

Oyl.

S. Bauh. Hiſt. Plant. l. 1. c. 28. You may ſqueeſe a ſweet ſmelling Oyl with your Hand out of the freſh Limon Pills, which is exceeding good to ſtrengthen the Heart, and to amend the Sight.

The

The Seed is alſo uſed in many Medicines, but the Juice is beſt known, as well in the Cooks, as the Apothecaries Shop; and is experienced with great Benefit againſt the Scurvy, and its Concomitants; wherefore it is much uſed by Seafaring Men againſt this Diſtemper. Of the Juice is a good Syrop made with Sugar, againſt hot burning Feavers. Seed and Juice.

The Water which is diſtilled out of the Juice of Limons through *Balneum Mariæ*, in a glazen Still; is good to take away all Spots out of the Skin, as alſo the Freckles of the Face, and kills all Worms of the Body, when it is Drunk, which the Juice doth likewiſe, when ye take an Ounce of it.

The Juice of Limons reſiſts all Poiſon, and venemous Creatures; the Limons are kept in Pickle, and ſtewed with Meat, which is a pleaſant Sawce. *Matthiol. in Dioſc. l. 1. c. 231.*

The

The ſmall Limon of *Calabria* is preſerved and kept in its own Juice or Liquor, to be eaten ſo.

And they are further on ſeveral ways Limonaded, which affords a pleaſant and cooling Drink, for which,

Take Barley-Water one Quart.

Squeeſe therein the Juice of four or five Limons, ſweeten it with Sugar as much as is neceſſary: This well ſtirred together, is the moſt pleaſant and cooling Drink which can be deſired.

To make *Paſtilli* of the Juice of Limons; Take

Ferrar. Heſp. l. 3. c. 1.

Of the Juice of ſmall Calabrian Limons one Ounce.

Of clear white Sugar-Candy, two Ounces.

Of Oyl of Cinnamon eight drops.

Let the Juice of the Limons drop through a cloſe piece of Cloth, or Strainer, that it may be Clear, and boyl it with the Sugar to a convenient Thickneſs, that ſo it may be poured

pouted out for *Paſtilli*; putting the Oyl of Cinnamon laſt of all to it.

Theſe *Paſtilli* are a very pleaſant Dainty, and cauſe a ſweet Breath.

Out of this Juice of Limons is a Syrop made on this manner;

Take of the Juice of Limons ſix Pounds; *Pharmacop. Auguſtan. Claſſ. 1.*

Of white Sugar, three Pounds.

Make hereof a Syrop by convenient Boyling. This Syrop is much uſed in Phyſick, in hot Diſtempers, burning Feavers, and Reſiſts all peſtilential Infections, and is uſed with good Succeſs and Benefit againſt the Worms in the Belly.

Further, the Virtues of the Limons are altogether like thoſe of the Citron, and are without any Error, Uſed promiſcuouſly one for the other.

This is all what was in ſhort to be ſaid of this Matter, leaving what may yet be brought to light by the diligent Scrutiny and Experience

rience of others, to them, whose Desire and Mind tends to a farther Enlargement of this Affair whereof I have Treated.

FINIS.

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